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Consumption of
Commercial Fertilizers and Primary Plant Nutrients
in the United States

year ended June 30, 1962

Agricultural Research Service
UNITED STATES DEPARTMENT OF AGRICULTURE

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Consumption of Commercial Fertilizers
and
Primary Plant Nutrients in the United States
Year Ended June 30, 1962

by

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Fertilizer products marketed for farm and nonfarm consumption and their primary plant-nutrient (N, P_2O_5, K_2O) contents are reported for individual States, the District of Columbia, and Puerto Rico, for the year ended June 30, 1962.

The data presented in tables 1 through 13 are based on information obtained from (1) fertilizer manufacturers on the tonnage of each kind and grade of product supplied to agents, dealers, and consumers, (2) distributors and custom applicators on shipments of anhydrous ammonia and nitrogen solutions, (3) manufacturers of base materials and brokers of products marketed direct to consumers, and (4) tonnage reports issued by States. Data for California, Florida, Massachusetts, Missouri, North Carolina, South Carolina, Texas, and Virginia were obtained chiefly from the State tonnage reports.

The tonnages of fertilizer reported as mixtures and as materials include all forms (bagged, bulk, granular, liquid, pulverized) marketed by the respondents indicated above. Mixtures prepared by dealers and applicators are not included as such, but the quantities of products (mixtures and materials) that were used in mixing by dealers and applicators are included.

The quantities of N, P_2O_5, and K_2O are based on the average analyses of samples of the products as reported by fertilizer-control officials of the respective State in which they were marketed, rather than on the manufacturers' guarantees. Thus, the overruns or underruns of nutrients are taken into account.

Quantities are reported as 2,000-pound tons. Although the data refer specifically to shipments, the terms "consumption," "sales," and "shipments" are used synonymously. Actual consumption undoubtedly differs slightly from either shipments or sales.

FERTILIZER

The kinds of fertilizer marketed for retail consumption are listed in table 1 with the amounts consumed in each region during the year ended June 30, 1962. The quantities do not include the amounts of these products that were used in the manufacture of commercial mixtures. The States constituting these regions are shown in table 2 together with the separate totals of commercial mixtures and of direct-application materials consumed in each. The total quantity of fertilizer consumed in the year ended June 30, 1962, was 26,615,037 tons, the highest yet recorded in the history of the United States. This total consisted of 25,305,249 tons of products containing one or more of the primary nutrients and 1,309,788 tons of secondary- and trace-nutrient materials marketed for retail consumption. Consumption of fertilizer containing primary nutrients increased by 931,680 tons, or 3.8 percent over the previous year. The quantity of secondary- and trace-nutrient materials increased by 116,227 tons, or 9.7 percent over consumption in 1960-61. However, total consumption of secondary- and trace-nutrient materials was still slightly below 1959-60 consumption.

The increase in the national consumption of primary-nutrient fertilizers reflects the increases or no change over 1960-61 that occurred in 36 of the 52 areas indicated (column 9, table 2). In comparison with the previous year, increases were as high as 44 percent (Oklahoma), whereas, the maximum decrease was 10 percent (Vermont).

The highest tonnage increase of fertilizers containing primary nutrients was found in Texas (262,765 tons), and the largest tonnage decrease was in Georgia (53,647 tons).

The trend to market higher concentrations of primary-nutrients continues as there is generally a higher percentage increase for tons of primary nutrients (column 10, table 2) than for gross tonnage of products (column 9, table 2).

The 1961-62 increase in the national consumption of primary-nutrient fertilizer (table 3) is slightly higher for materials (5.3 percent) than for mixtures (3.0 percent). The West South Central region showed the largest gain in consumption of primary-nutrient fertilizers (24.2 percent).

MIXTURES

In 1961-62 mixtures comprised 60.9 percent of the tonnage of all fertilizers consumed and amounted to 16,205,303 tons. There were 2,281 grades reported in 1961-62 compared with 2,202 in the preceding year.

An unknown number of grades were reported as miscellaneous tonnage. These are principally mixtures prepared to specifications of customers or as a specialty product of a manufacturer.

Total consumption of mixtures in 36 areas increased 671,558 tons (5.6 percent) and in 16 areas decreased 200,966 tons (5.2 percent), when compared with the preceding year.

The principal type of mixtures consumed contain all three primary nutrients (table 1). In 1961-62, this type represented 87.0 percent of the tonnage of mixtures, whereas the N-P, P-K, and N-K mixtures accounted for 5.0, 5.8, and 2.2 percent, respectively. The number of grades reported as type N-P-K were 1,546 (67.8 percent); N-P, 257 (11.3 percent); P-K, 251 (11.0 percent); and N-K, 227 (9.9 percent). The N-P-K mixtures comprised more than 75 percent of the tonnage of mixtures in all regions except the Mountain and Pacific. In these regions, N-P-K mixtures represented 35.4 and 62.9 percent, respectively, and the N-P type 64.2 and 35.5 percent, respectively. The N-P class does not include the ammoniated phosphate grades 11-48-0, 13-39-0, 16-20-0, 21-53-0, and 27-14-0 which are classed as materials in this publication. However, all other N-P grades, including 16-48-0, 18-46-0, and 24-20-0 are contained in this class of mixtures.

In the United States, excluding Alaska, Hawaii, and Puerto Rico, grades consumed in quantities of 10,000 or more tons each, numbered 137. Only 136 of these are listed in table 4, as one grade was marketed by less than three producers. The 137 grades totaled 14,369,970 tons and accounted for 90.36 percent of the quantity of mixtures used in the 48 States and the District of Columbia. Other grades consumed in amounts of 2,500 to 9,999 tons totaled 123 (607,384 tons, 3.82 percent), whereas consumption of grades under 2,500 tons totaled 1,949 (476,599 tons, 3.00 percent). The balance (447,655 tons, 2.82 percent) represented mixtures not reported by grade. The increase in tonnage over 1960-61 for the class, not reported by grade, is due to the large quantity of customer-ordered mixtures for which grades are not always given.

The 15 grades of mixtures consumed in largest tonnage in each of the regions in 1961-62 are shown in table 5, together with the quantities for each State in the region. At least 11 of the grades were among those previously listed in the region in 1960-61. The listed grades in 1961-62 accounted for 51 percent or more of the total tonnage of mixtures consumed in each of the States, except California, Colorado, Florida, Nevada, Nebraska, North Dakota, Oregon, and South Dakota. In these States, they represent 24 to 49 percent of the total tonnage of mixtures consumed. The low percentage in these States is explained by the large number (1,238) of grades used in Florida and the predominate tonnage of the ammoniated-phosphate grades, which are classed as materials in this publication.

The total tonnage of 15 grades listed for the United States, excluding Alaska, Hawaii, and Puerto Rico, represent 55.4 percent of the tonnage of all mixtures. As in the preceding year, the 5-10-10, 4-12-12, 5-20-20, 12-12-12, and 10-10-10 grades were consumed in largest tonnage. The total tonnage of these grades during each of the past 4 years has accounted for approximately one-third of the tonnage of all mixtures consumed. Except for the grade 4-16-16, which was replaced by grade 8-8-8, the other nine grades were the same as in 1960-61; but in general their relative standing differed somewhat.

Nearly 85 percent of the total tonnage of mixtures consumed in the 50 States and Puerto Rico was represented by 34 primary-nutrient ratios. These ratios are listed in table 6.

The tonnage listed for each ratio is the accumulated tonnage for each grade in that ratio, totaling 50,000 or more tons. Ratios 1:1:1, 1:2:2, 1:4:4, and 1:3:3 accounted for the largest tonnage, in descending order, and their cumulative total amounted to 50 percent of the total of all mixtures. Excepting the noncontiguous areas (Alaska, Hawaii, Puerto Rico), the total tonnage of the 34 ratios represented from 36 percent (Pacific) to 98 percent (East South Central) of the particular regional consumption of all mixtures. Compared with 1960-61, all but four of the principal nutrient ratios were the same. Their order of tonnage, however, has changed somewhat; ratios 1:3:9, 1:4:0, 3:5:2, and 4:10:7 are not in the current list and ratios 7:2:5 and 9:23:0 have been added.

The national average primary-nutrient content of mixtures in 1961-62 was 7.08 percent of N, 13.70 percent of available P_2O_5, and 12.17 percent of K_2O—a total of 32.95 percent (table 7). These averages were for N

4.0 percent, for available P_2O_5 4.2 percent, and for K_2O 1.7 percent higher than the corresponding averages in 1960-61. The high rate of increase for nitrogen resulted from substantial increases in average nitrogen content in 44 of the 52 areas. The greatest increases were recorded in the Mountain States. For the first time in more than 10 years, the national yearly increase of average primary-nutrient content in mixtures was higher for available P_2O_5 than for the other two nutrients. The East South Central regional average of available P_2O_5 in mixtures increased 7.0 percent over last year and the Mountain region increased 6.6 percent. No regional average was lower than last year. Average K_2O increases were noted in 36 areas.

PRIMARY-NUTRIENT MATERIALS

Consumption of primary-nutrient materials for direct application amounted to 9,099,946 tons and accounted for 34.2 percent of all fertilizers used in 1961-62. The tonnages of the principal products used in each State in 1961-62 are shown in table 8.

The national consumption of primary-nutrient materials was 461,088 tons, or 5.3 percent, more than the 8,638,858 tons consumed in 1960-61. Most of the increase was reflected in the chemical nitrogen materials (table 9). The increase in tonnage of these materials was principally due to the increase in use of nitrogen solutions (242,194 tons, 25.5 percent), anhydrous ammonia (123,253 tons, 15.2 percent) and urea (88,688 tons, 43.5 percent).

Significant increases in consumption of chemical nitrogen materials were recorded in the West South Central region (25.96 percent), East North Central regions (18.65 percent), and West North Central region (11.02 percent). Most of the increased use of the above three products was recorded in these regions.

Natural organic products showed very little national gain. Increased consumption of dried blood, compost, cottonseed meal, and manure was offset by decreased usage of castor pomace, fish scrap meal and emulsions, sewage sludge, tankage, and other natural organic products.

Total use of phosphate materials was lower in all regions except the West South Central and Pacific. Substantial decreases of phosphate rock consumption in the East North Central and West North Central regions accounted for most of the decline of phosphate material tonnage.

Tonnage of triple superphosphate and ammoniated phosphates showed gains over last year, but not enough to offset the loss by phosphate rock, normal superphosphate, and other phosphate.

The ammoniated phosphate grades included in phosphate materials are 11-48-0, 13-39-0, 16-20-0, 21-53-0, and 27-14-0. Consumption of these as materials is recorded in table 10 and includes all the quantities of each grade, whether reported as mixtures or as materials. All other N-P grades, as was mentioned before, such as 16-48-0, 18-46-0, and 24-20-0, are classed as mixtures in this publication. (The tonnages of individual grades of such mixtures are shown in tables 4 and 5.) Consumption of grades 11-48-0, 16-20-0, 21-53-0, and 27-14-0 increased in 1961-62, but that of grade 13-39-0 was slightly lower, as compared with its use in the previous year. The proportionate consumption of these materials is about the same as last year.

Potash materials increased nearly 6 percent in 1961-62. The biggest percentage and tonnage increase occurred in the West North Central region. In the South Atlantic and East North Central regions, where potash is principally consumed, substantial increases were also recorded.

The average primary-nutrient contents of the direct-application materials used in each of the areas are shown in table 7. These averages were computed from the actual analysis and reported tonnages of the individual materials comprising the respective classes. In 1961-62, single-nutrient nitrogen materials averaged 37.24 percent N; phosphate materials 21.60 percent available P_2O_5; and potash materials, 54.90 percent K_2O. The total primary-nutrient content of multiple-nutrient materials averaged 28.92 percent, and all materials combined averaged 34.15 percent. The corresponding averages in 1960-61 were 36.37, 19.55, 55.48, 27.93, and 32.65 percent. The continued greater use of higher analysis nitrogen products such as anhydrous ammonia, ammonium nitrate, nitrogen solutions, and urea account for this single-nutrient nitrogen increase. Materials of lower nitrogen content, such as ammonium nitrate-limestone mixtures, calcium cyanamide, and calcium nitrate decreased in use. Single-nutrient available P_2O_5 showed the greatest average nutrient content increase. This resulted from the substantial decrease in phosphate rock consumption (only 3.0 percent average available P_2O_5 content) and an increase in consumption of superphosphate grade containing over 22 percent available P_2O_5. The lower average for single-nutrient potash materials, though not significant, resulted from recording slightly lower averages for most all products consumed in this class.

The averages of the nutrient contents of materials, shown in table 7, are indicative of the relative grades of products consumed in principal quantities in each designated area. It is apparent from these averages that the products consumed in the regions along the Atlantic seaboard have, on the average, a lower primary-nutrient content than the materials in other regions. Primary-nutrient averages for materials have been highest in the West South Central region since 1956.

SECONDARY- AND TRACE-NUTRIENT MATERIALS

The separate quantities of the secondary- and trace-nutrient materials marketed to consumers for use as such are shown for each region in table 1 and their total for each State in table 8. There are undoubtedly retail sales of products supplied through chemical manufacturers and amounts blended into fertilizers for which there are no records.

The principal sources of the secondary-nutrient elements calcium, magnesium, and sulfur are limestone, dolomite, and gypsum, respectively. Other products, such as ammonium nitrate-limestone mixtures, potassium-magnesium sulfate, and ammonium sulfate, are sometimes used for these nutrients, as these offer the advantage of also applying the primary nutrients.

The more important trace-nutrient elements—boron, copper, iron, manganese, and zinc—are required by plants only in very small amounts. These are usually available in adequate quantities in most soils. Deficiencies of these elements occur in certain areas; under intensive culture the plants may remove greater quantities than the soil would normally be called upon to supply. The use of trace elements, therefore, is simply a matter of fitting a remedy to a specific need. Application of these to correct deficiencies is commonly in the form of the sulfate salt at rates of 10 to 50 pounds or more per acre, depending on the crop and potential toxicity. It is also general practice to add these trace elements to fertilizers for application on land where such need is justified. Fertilizers enriched with boron, copper, iron, manganese, and zinc have contained, on the average, 0.09 percent boron (B), 0.36 percent copper (Cu), 0.46 percent iron (Fe), 0.63 percent manganese (Mn), and 0.39 percent zinc (Zn).

In 1961-62, the total consumption of secondary- and trace-nutrient materials for direct application collected in this survey amounted to 1,309,788 tons, or 4.9 percent, of all fertilizers used. This quantity was 116,227 tons, or 9.7 percent, more than the 1,193,561 tons used in 1960-61. In 1961-62, calcium sulfate (gypsum) comprised 1,223,936 tons, or 93.4 percent, of the total tonnage of this class of products. Other principal products were metallic salts totaling 41,532 tons (3.2 percent) sulfur, sulfuric acid, and lime sulfur solution totaling 37,511 tons (2.9 percent). Various soil conditioners and miscellaneous secondary- and trace-nutrient materials comprise the remainder of the total. Most of the increase in the secondary- and trace-nutrient material class of fertilizer is attributed to the enhanced use of the principal product, gypsum, which increased 110,513 tons, or 9.9 percent from that used in 1960-61. A substantial increase of 8,408 tons, or a 25.4-percent increase was recorded for metallic salts, whereas the sulfur-bearing products decreased slightly (674 tons, or 1.8 percent).

PRIMARY PLANT NUTRIENTS

During the year ended June 30, 1962, fertilizers used in the 50 States and Puerto Rico contained 8,447,556 tons of primary plant nutrients (N, available P_2O_5, K_2O), as shown in table 11. Nitrogen consumption was 3,369,980 tons, an increase of 339,192 tons (11.2 percent); that of available P_2O_5, 2,807,039 tons, an increase of 161,954 tons (6.1 percent); and that of K_2O, 2,270,537 tons, an increase of 102,004 tons (4.7 percent).

Mixtures supplied 1,147,266 tons (34.0 percent) of the N, 2,219,444 tons (79.1 percent) of the available P_2O_5, and 1,973,149 tons (86.9 percent) of the K_2O. These quantities represented increases of 7.1, 7.2, and 4.8 percent for N, available P_2O_5, and K_2O, respectively, compared with consumption in 1960-61.

Materials used for direct application supplied 2,222,714 tons (66.0 percent) of the N, 587,595 tons (20.9 percent) of the available P_2O_5, and 297,388 tons (13.1 percent) of the K_2O. These quantities represented increases of 13.4, 2.1, and 4.2 percent, respectively, over the previous year.

Consumption of primary nutrients supplied by mixtures and by direct-application materials in 1961-62 is compared in table 12 with the consumption in 1960-61. Increase in the use of nitrogen was highest in the West South Central region (102,046 tons, 30.0 percent), the East North Central region (74,752 tons, 15.4 percent), and West North Central region (54,948 tons, 8.5 percent). Increase in use of available P_2O_5 was likewise highest in these three regions and in the same order above (56,182 tons, 27.8 percent; 50,681 tons, 8.1 percent; and 25,862 tons, 5.2 percent). Consumption of this nutrient decreased in the South Atlantic region (5,033 tons, 1.0 percent) and Mountain region (567 tons, 0.5 percent). The change in consumption of K_2O ranged from an increase of 26,376 tons

(4.2 percent) in the East North Central region to a decrease of 742 tons (12.1 percent) in the Mountain region.

The quantities of primary nutrients supplied in each region in 1961-62 according to the kinds of fertilizer products listed in table 1 are shown in table 13. Consumption of nitrogen as N-P-K mixtures, anhydrous ammonia, ammonium nitrate, and nitrogen solutions ranged from 45 percent in the noncontiguous areas to 93 percent in the New England region. These four products contributed to the national nitrogen consumption the following percentages, respectively: 28.7, 22.8, 13.9, and 11.0 percent. Together they accounted for 76.4 percent of the total nitrogen used.

In all regions, except for the Mountain and Pacific regions, and noncontiguous areas over 50 percent of the available P_2O_5 was consumed in the form of N-P-K mixtures and superphosphate (grades over 22 percent). N-P-K mixtures accounted for 65.3 percent and superphosphate (grades over 22 percent) for 7.7 percent, or a total of 73.0 percent of the national consumption of available P_2O_5. In the Mountain and Pacific regions, N-P mixtures and the ammoniated phosphates (11-48-0, 13-39-0, 16-20-0, 27-14-0, 21-53-0) were the principal forms used and accounted for over 46 percent of the total consumed.

Consumption of K_2O was principally in the form of N-P-K mixtures. N-P-K mixtures supplied from 54.4 percent in the noncontiguous areas to 82.6 percent in the New England region and accounted for 75.3 percent of the national use.

Table 1. - Kinds of fertilizer consumed, by region, year ended June 30, 1962[1]

Kind	New England	Middle Atlantic	South Atlantic	East North Central	West North Central	East South Central	West South Central	Mountain	Pacific	Alaska, Hawaii, and Puerto Rico	United States
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
MIXTURES	351,332	1,754,385	5,139,866	3,340,883	1,683,122	2,069,672	933,327	117,815	511,206	303,695	16,205,303
N-P-K	327,177	1,626,002	4,611,465	3,065,843	1,265,470	1,835,809	752,759	41,726	321,643	242,609	14,090,503
N-P	72	2,306	3,093	73,454	341,672	21,945	110,055	75,667	181,260	4,741	814,265
P-K	24,083	125,902	239,506	192,217	75,345	205,324	66,301	362	3,762	4,152	936,954
N-K	0	175	285,802	9,369	635	6,594	4,212	60	4,541	52,193	363,581
CHEMICAL NITROGEN MATERIALS	9,903	92,748	857,545	762,783	1,124,481	634,929	699,010	314,148	1,010,446	92,367	5,598,360
Ammonia, anhydrous	0	3,873	27,113	148,602	256,246	76,430	215,633	61,789	144,135	922	934,743
Ammonia, aqua	0	0	69	32,107	41,661	239	15,742	39,501	328,207	38,777	496,303
Ammonium nitrate[2]	4,708	27,195	148,614	164,723	392,140	288,861	186,443	84,487	87,741	2,857	1,387,769
Ammonium nitrate-limestone mixtures	2	1,866	189,118	222	0	39,215	347	50	86	6	230,912
Ammonium sulfate	158	8,625	7,465	88,592	7,699	13,378	85,859	45,056	277,959	22,910	557,701
Calcium cyanamide	508	5,821	6,508	555	85	7,920	4,591	1,055	4,604	4	31,651
Calcium nitrate	0	6	11,579	1	0	0	40	13,038	22,223	106	46,993
Nitrogen solutions	1,768	22,164	257,575	263,671	394,328	64,148	69,073	30,080	88,168	4	1,190,979
Sodium nitrate	997	10,890	202,798	2,403	608	136,567	52,433	562	508	26	407,792
Urea	1,530	10,766	5,014	58,305	29,372	4,830	68,415	34,122	53,513	26,755	292,622
Other	232	1,542	1,692	3,602	2,342	3,341	434	4,408	3,302	0	20,395
NATURAL ORGANIC MATERIALS	20,592	38,043	36,598	43,123	13,836	3,027	4,252	38,433	329,932	0	527,836
Blood, dried	8	41	64	7	3	0	0	4	2,638	0	2,765
Castor pomace	898	280	2,995	0	0	0	0	0	1,129	0	5,302
Compost	945	2,001	146	9,315	3,866	119	402	13,045	1,758	0	31,597
Cottonseed meal[3]	5,077	132	2,486	26	76	16	1	35	230	0	8,079
Fish scrap, meal, and emulsions	495	11	15	0	60	0	0	5	1,220	0	1,806
Manures, dried	4,771	15,027	10,197	8,593	2,241	1,228	1,703	12,344	[4]282,239	0	338,343
Sewage sludge, activated	6,452	13,496	14,302	24,417	7,423	1,233	1,197	2,902	11,470	0	82,892
Sewage sludge, other	15	0	82	139	74	0	0	2,047	27,607	0	29,964
Tankage, all	1,463	6,400	3,083	577	93	431	0	0	780	0	12,827
Other	468	655	3,228	49	0	0	949	8,051	861	0	14,261
PHOSPHATE MATERIALS	26,955	77,552	91,541	588,160	577,711	185,691	353,501	204,242	316,352	14,383	2,436,088
Ammonium phosphate: 11-48[5]	0	1,016	43	22,125	61,992	514	8,744	17,778	24,600	1,857	138,669
Ammonium phosphate: 13-39[5]	0	0	0	86	9,850	112	22,642	1,996	4,918	0	39,604
Ammonium phosphate sulfate: 16-20[5]	0	0	0	308	103,273	209	177,685	51,478	130,491	107	463,551
Ammonium phosphate nitrate: 27-14[5]	0	0	81	217	16,896	1,289	0	8,149	11,032	2	37,666
Basic slag	0	0	9,556	0	0	60,805	2,025	0	0	0	72,386
Bonemeal: raw and steamed	1,269	2,663	1,292	1,598	395	278	257	43	1,945	16	9,756
Calcium metaphosphate	7	240	1,041	2,682	3,190	8,705	412	238	159	0	16,674
Diammonium phosphate: 21-53[5]	28	277	1,587	6,198	7,638	2,532	1,424	13,357	5,784	243	39,068
Phosphoric acid	0	0	0	596	2,660	0	635	12,354	11,162	0	27,407
Phosphate rock	267	4,103	9,590	411,712	154,623	8,832	21,248	80	358	4,444	615,257
Colloidal phosphate	0	351	1,574	891	2,225	5,951	870	0	40	0	11,902
Superphosphate: 18%	792	3,765	15,441	3,523	6,505	18,485	596	0	554	0	49,661
Superphosphate: 19%	0	328	3,861	0	12,506	20,406	259	2,728	395	0	40,483
Superphosphate: 20-22%	23,745	57,727	32,426	38,500	16,812	43,542	58,871	14,394	100,630	4,475	391,122
Superphosphate: 23-44%	0	0	0	2,654	54	14	35	418	459	1,905	5,539
Superphosphate: 45%	15	1,758	117	15,187	65,121	1,870	5,300	28,466	20,871	1,330	140,035
Superphosphate: 46%	404	4,403	245	76,021	109,207	5,177	47,479	50,024	2,012	0	294,972
Superphosphate: 47-54%	65	324	3,986	3,662	4,422	4,573	4,755	2,690	44	0	24,521
Other	363	597	10,701	2,200	342	2,397	264	49	898	4	17,815
POTASH MATERIALS	1,813	13,493	97,671	225,906	62,896	61,694	39,744	3,088	22,208	9,149	537,662
Lime-potash mixtures[6]	0	991	22,514	0	40	6,096	0	0	54	0	29,695
Manure salts	0	0	6,344	29	4	0	30	0	0	0	6,407
Potassium chloride: 50-62%	1,085	8,357	34,078	220,449	62,177	43,611	36,385	1,923	11,738	7,688	427,491
Potassium magnesium sulfate	34	983	7,562	2,584	244	1,752	2,048	433	1,231	98	16,969
Potassium nitrate	113	10	66	1	0	3	0	0	0	0	193
Potassium sodium nitrate[7]	98	1,250	15,017	592	0	1,945	318	0	1	1	19,222
Potassium sulfate	146	1,351	6,205	2,143	256	8,287	99	732	8,538	1,362	29,619
Other	337	51	5,885	108	175	0	864	0	646	0	8,066
SECONDARY AND TRACE NUTRIENT MATERIALS	111	5,886	141,175	3,546	1,557	3,944	6,271	38,374	1,107,189	1,735	1,309,788
Aluminum sulfate[3]	0	46	16	47	2	1	0	4	90	0	206
Borax[3]	37	134	605	403	24	332	1	41	1,807	0	3,384
Calcium sulfate (gypsum)	35	814	135,641	1,134	261	3,549	3,706	27,770	1,051,024	2	1,223,936
Copper sulfate[3]	0	4,115	327	78	1	0	0	1	42	0	4,564
Iron sulfate[3]	0	0	301	2	3	3	3	500	5,887	1,447	8,146
Magnesium sulfate[3]	39	317	506	62	0	0	0	1	974	148	2,047
Manganese sulfate[3]	0	111	480	554	7	0	0	0	275	0	1,427
Mixed minerals[3]	0	0	1,073	737	0	0	0	232	5,277	0	7,319
Sulfur: 85-99% S	0	24	1,511	223	47	0	1,047	1,213	17,864	0	21,929
Sulfuric acid: 40-93%	0	0	0	7	0	0	1,462	2,687	2,034	0	6,190
Zinc sulfate[3]	0	11	633	24	91	19	1	127	4,581	87	5,574
Other	0	314	82	275	1,121	40	51	5,798	17,334	51	25,066
GRAND TOTAL	410,706	1,982,107	6,364,396	4,964,401	3,463,603	2,958,957	2,036,105	716,100	3,297,333	421,329	26,615,037

[1] Includes the following fertilizers distributed by Government agencies for test demonstrations: - as mixtures, 7,764 tons; as materials, 11,459 tons. Excludes liming materials and the quantities of materials used in the manufacture of commercial mixtures. Primary-nutrient contents are shown in table 13. [2] Undetermined quantities may have been used for nonfarm purposes. [3] Distributed by manufacturers of fertilizers. [4] Includes an estimate of 278,000 tons consumed in California. [5] Includes all reported quantities of the grade. [6] Additional quantities may have been given to farmers for which no records are kept. [7] Additional quantities may have been reported by grade under mixtures (see table 4).

Table 2. - Fertilizer consumed as mixtures and as direct-application materials, by State and region, year ended June 30, 1962, and comparison with preceding year

State and region	Mixtures			Materials[1]			Grand total	Comparison with total consumption in year ended June 30, 1961	
	July 1 - Dec. 31, 1961	Jan. 1 - June 30, 1962	Total	July 1 - Dec. 31, 1961	Jan. 1 - June 30, 1962	Total		Fertilizer[2]	N, avail. P_2O_5, and K_2O
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Percent	Percent
Maine	28,046	131,615	159,661	2,411	4,589	7,000	166,661	100	100
New Hampshire	2,812	11,168	13,980	1,013	2,531	3,544	17,524	96	99
Vermont	7,789	32,196	39,985	3,000	12,476	15,476	55,461	90	92
Massachusetts	12,521	52,895	65,416	3,654	10,332	13,986	79,402	101	102
Rhode Island	1,916	12,671	14,587	451	1,400	1,851	16,438	97	100
Connecticut	11,406	46,297	57,703	4,197	13,320	17,517	75,220	107	106
New England	64,490	286,842	351,332	14,726	44,648	59,374	410,706	100	100
New York	103,895	415,049	518,944	20,514	47,499	68,013	586,957	99	100
New Jersey	46,518	166,686	213,204	7,141	18,422	25,563	238,767	107	109
Pennsylvania	159,752	421,599	581,351	23,304	62,168	85,472	666,823	103	103
Delaware	15,356	68,326	83,682	1,806	6,426	8,232	91,914	103	110
District of Columbia	1,250	1,894	3,144	391	849	1,240	4,384	99	97
Maryland	70,315	223,424	293,739	5,774	20,557	26,331	320,070	111	115
West Virginia	11,569	48,752	60,321	3,360	9,511	12,871	73,192	98	98
Middle Atlantic	408,655	1,345,730	1,754,385	62,290	165,432	227,722	1,982,107	103	104
Virginia	153,366	497,386	650,752	19,439	93,983	113,422	764,174	101	103
North Carolina	159,539	1,174,281	1,333,820	59,733	278,361	338,094	1,671,914	102	102
South Carolina	104,782	505,766	610,548	30,705	172,913	203,618	814,166	101	102
Georgia	172,721	967,625	1,140,346	56,562	312,767	369,329	1,509,675	96	98
Florida	528,054	876,346	1,404,400	67,622	132,445	200,067	1,604,467	102	103
South Atlantic	1,118,462	4,021,404	5,139,866	234,061	990,469	1,224,530	6,364,396	100	101
Ohio	246,460	616,065	862,525	33,055	144,562	177,617	1,040,142	113	117
Indiana	201,017	615,601	816,618	87,767	290,842	378,609	1,195,227	107	110
Illinois	178,178	564,720	742,898	319,735	565,466	885,201	1,628,099	100	115
Michigan	208,048	361,326	569,374	28,435	75,623	104,058	673,432	93	93
Wisconsin	89,019	260,449	349,468	23,110	54,923	78,033	427,501	96	99
East North Central	922,722	2,418,161	3,340,883	492,102	1,131,416	1,623,518	4,964,401	103	109
Minnesota	110,871	288,429	399,300	43,377	117,595	160,972	560,272	100	101
Iowa	100,023	383,018	483,041	88,569	301,081	389,650	872,691	110	116
Missouri	145,812	351,685	497,497	130,603	223,890	354,493	851,990	96	100
North Dakota	9,982	42,432	52,414	34,445	81,193	115,638	168,052	104	104
South Dakota	2,599	18,052	20,651	11,048	34,026	45,074	65,725	125	130
Nebraska	10,210	68,651	78,861	88,969	297,373	386,342	465,203	94	96
Kansas	92,916	58,442	151,358	123,356	204,956	328,312	479,670	118	122
West North Central	472,413	1,210,709	1,683,122	520,367	1,260,114	1,780,481	3,463,603	104	107
Kentucky	74,978	419,530	494,508	36,002	101,016	137,018	631,526	110	116
Tennessee	104,426	383,097	487,523	42,803	112,026	154,829	642,352	103	106
Alabama	142,210	614,865	757,075	49,142	201,982	251,124	1,008,199	99	106
Mississippi	31,688	298,878	330,566	113,573	232,741	346,314	676,880	100	104
East South Central	353,302	1,716,370	2,069,672	241,520	647,765	889,285	2,958,957	102	108
Arkansas	22,724	183,636	206,360	49,951	150,062	200,013	406,373	109	109
Louisiana	38,712	140,513	179,225	39,585	112,908	152,493	331,718	106	107
Oklahoma	62,949	63,539	126,488	59,787	78,900	138,687	265,175	144	147
Texas	110,689	310,565	421,254	279,646	331,939	611,585	1,032,839	134	138
West South Central	235,074	698,253	933,327	428,969	673,809	1,102,778	2,036,105	124	127
Montana	1,445	4,438	5,883	11,696	33,233	44,929	50,812	98	93
Idaho	7,710	24,478	32,188	39,141	102,970	142,111	174,299	93	92
Wyoming	416	734	1,150	3,389	11,026	14,415	15,565	107	105
Colorado	4,974	20,487	25,461	36,851	86,040	122,891	148,352	115	119
New Mexico	1,481	9,439	10,920	14,155	37,769	51,924	62,844	127	127
Arizona	9,275	21,773	31,048	73,293	109,099	182,392	213,440	99	101
Utah	3,052	6,628	9,680	8,197	24,465	32,662	42,342	95	104
Nevada	305	1,180	1,485	1,413	5,548	6,961	8,446	103	114
Mountain	28,658	89,157	117,815	188,135	410,150	598,285	716,100	102	104
Washington	29,806	62,452	92,258	126,552	153,447	279,999	372,257	139	138
Oregon	9,389	41,620	51,009	63,322	135,385	198,707	249,716	102	103
California	65,534	302,405	367,939	1,054,614	1,252,807	2,307,421	2,675,360	100	102
Pacific	104,729	406,477	511,206	1,244,488	1,541,639	2,786,127	3,297,333	105	108
48 States and D. C.	3,708,505	12,193,103	15,901,608	3,426,658	6,865,442	10,292,100	26,193,708	104	108
Alaska	0	2,040	2,040	0	2,979	2,979	5,019	111	120
Hawaii	41,733	41,374	83,107	38,746	36,421	75,167	158,274	100	114
Puerto Rico	89,623	128,925	218,548	19,398	20,090	39,488	258,036	106	114
United States: 1961-62	3,839,861	12,365,442	16,205,303	3,484,802	6,924,932	10,409,734	26,615,037	104	108
1960-61	3,912,334	11,822,377	15,734,711	3,437,104	6,395,315	9,832,419	25,567,130	100	100
1959-60	3,750,142	11,899,480	15,649,622	3,208,666	6,019,127	9,227,793	24,877,415	96	95

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[1] Includes the primary-nutrient (N, P_2O_5, K_2O) and the secondary- and trace-nutrient materials.

[2] Guaranteed to contain one or more of the primary nutrients.

Table 3. - Change in consumption of fertilizer mixtures and direct-application materials, by region, year ended June 30, 1962, compared with preceding year

Region	Increase or Decrease (-)					
	Mixtures	Materials[1]	Total	Mixtures	Materials[1]	Total
	Tons	Tons	Tons	Percent	Percent	Percent
New England	-650	-930	-1,580	-0.2	-1.5	-0.4
Middle Atlantic	58,548	6,929	65,477	3.4	3.2	3.4
South Atlantic	-46,350	66,595	20,245	-0.9	6.5	0.3
East North Central	132,991	2,775	135,766	4.1	0.2	2.8
West North Central	30,883	87,984	118,867	1.9	5.2	3.6
East South Central	49,400	8,794	58,194	2.4	1.0	2.0
West South Central	170,752	224,644	395,396	22.4	25.8	24.2
Mountain	8,296	7,943	16,239	7.6	1.4	2.4
Pacific	50,759	56,711	107,470	11.0	3.5	5.2
Total (above regions)	454,629	461,445	916,074	2.9	5.4	3.8
Alaska	328	177	505	19.2	6.4	11.3
Hawaii	6,327	-5,858	469	8.2	-7.4	0.3
Puerto Rico	9,308	5,324	14,632	4.4	15.6	6.0
United States	470,592	461,088	931,680	3.0	5.3	3.8

[1] Excludes quantities of secondary- and trace-nutrient materials for direct application.

Table 4. - Grades of fertilizer mixtures consumed, United States, years ended June 30, 1961 and 1962[1]

Grade[2]	Consumption		Proportion of total		Grade[2]	Consumption		Proportion of total	
	1961	1962	1961	1962		1961	1962	1961	1962
	Tons	Tons	Percent	Percent		Tons	Tons	Percent	Percent
0-9-27	19,684	24,516	0.13	0.15	6-24-24	289,071	372,471	1.87	2.34
0-10-20	94,071	102,398	.60	.64	7-21-0	20,266	26,086	.13	.16
0-10-30	43,503	43,202	.28	.27	7-21-7	2,348	10,176	.01	.07
0-12-36	13,343	11,534	.09	.08	7-27-11	9,789	12,143	.06	.08
0-14-14	142,381	139,076	.92	.87	7-28-14	86,842	154,761	.56	.97
0-15-30	41,131	48,939	.27	.31	8-0-8	18,233	19,178	.12	.12
0-15-45	13,554	14,534	.09	.09	8-0-10	18,533	13,652	.12	.08
0-16-8	35,755	44,208	.23	.28	8-0-24	32,209	37,482	.21	.24
0-18-36	9,074	12,342	.06	.07	8-2-8	31,733	46,702	.20	.29
0-20-10	10,393	12,441	.06	.08	8-4-6	8,115	10,296	.06	.07
0-20-20	256,004	268,431	1.66	1.69	8-4-8	73,732	77,170	.48	.48
0-24-24	19,691	16,539	.13	.11	8-6-4	11,229	10,681	.07	.07
0-25-25	53,786	65,172	.35	.41	8-8-8	226,784	252,200	1.46	1.59
0-30-15	16,273	18,285	.10	.11	8-12-12	71,869	68,134	.47	.43
2-12-12	255,506	230,294	1.66	1.45	8-16-16	184,505	182,919	1.19	1.15
3-9-6	20,865	14,497	.13	.09	8-24-0	89,439	59,500	.57	.37
3-9-9	507,849	543,066	3.29	3.42	8-24-8	56,590	51,583	.37	.32
3-9-12	43,609	41,268	.28	.26	8-24-12	40,232	29,114	.26	.19
3-9-13	32,262	29,413	.21	.18	8-24-24	4,378	14,189	.02	.09
3-9-18	87,295	92,702	.56	.58	8-32-0	39,215	29,767	.25	.18
3-9-27	40,598	35,734	.27	.23	8-32-16	44,343	61,326	.29	.39
3-10-8	0	16,441	0	.10	9-9-9	31,024	24,974	.20	.16
3-12-6	39,045	28,607	.25	.18	9-12-12	20,011	28,537	.13	.18
3-12-12	334,264	249,504	2.16	1.57	10-0-10	25,111	33,340	.16	.21
3-18-18	16,971	16,204	.11	.10	10-2-10	0	11,677	0	.07
4-6-8	23,654	21,487	.16	.14	10-4-10	13,005	15,144	.08	.09
4-7-5	72,499	62,973	.47	.39	10-5-5	16,520	13,495	.10	.09
4-8-6	30,217	12,663	.19	.08	10-6-4	106,458	119,268	.69	.75
4-8-8	83,990	87,554	.54	.55	10-10-5	37,660	16,365	.24	.10
4-8-10	21,883	20,010	.15	.13	10-10-10	715,817	753,040	4.63	4.74
4-8-12	216,991	205,917	1.40	1.30	10-15-15	15,889	18,741	.10	.12
4-8-16	25,476	26,344	.17	.16	10-20-0	44,218	42,066	.28	.26
4-9-3	55,685	54,923	.36	.35	10-20-5	14,795	12,022	.09	.08
4-10-6	85,222	69,607	.55	.43	10-20-10	260,448	323,136	1.68	2.03
4-10-7	201,710	18,703	1.30	.12	10-20-20	75,392	85,433	.49	.54
4-10-10	40,886	21,921	.26	.14	10-20-25	0	15,046	0	.09
4-11-11	16,258	13,072	.10	.08	10-30-10	14,924	20,972	.09	.14
4-12-4	16,079	12,261	.10	.07	11-12-14	13,161	14,851	.09	.09
4-12-8	94,801	90,213	.61	.57	12-0-10	16,906	17,128	.11	.11
4-12-12	1,166,668	1,211,360	7.56	7.62	12-0-12	16,899	19,055	.11	.12
4-12-36	12,449	12,642	.08	.08	12-6-6	31,556	28,878	.20	.18
4-16-8	20,051	16,140	.13	.10	12-12-12	864,399	890,108	5.59	5.60
4-16-16	292,839	244,028	1.89	1.54	12-24-12	45,982	51,987	.29	.32
5-7-5	15,390	12,934	.10	.08	13-13-13	86,473	101,564	.55	.64
5-10-5	286,796	245,822	1.85	1.55	14-0-14	60,964	52,104	.40	.33
5-10-10	1,443,732	1,386,153	9.35	8.71	14-7-7	14,003	12,420	.09	.08
5-10-15	494,625	577,530	3.20	3.64	14-14-7	9,945	10,371	.07	.06
5-10-30	26,826	26,615	.17	.16	14-14-14	70,628	76,411	.45	.48
5-20-10	110,315	99,872	.72	.63	15-0-14	8,530	10,961	.05	.07
5-20-20	894,989	956,110	5.79	6.01	15-0-15	30,530	30,194	.19	.19
6-4-2	14,236	14,960	.09	.09	15-5-5	25,786	17,895	.17	.11
6-4-6	37,873	40,821	.24	.26	15-8-4	16,903	13,493	.10	.09
6-4-8	71,048	67,760	.46	.42	15-10-10	70,823	67,646	.46	.42
6-5-6	0	10,550	0	.07	15-15-0	20,958	17,646	.13	.11
6-6-6	110,547	113,688	.71	.72	15-15-15	61,863	68,023	.40	.43
6-6-8	15,186	13,006	.10	.08	16-8-8	84,166	106,666	.55	.67
6-6-12	26,315	23,514	.17	.15	16-16-8	20,866	19,460	.13	.12
6-6-18	15,623	15,487	.10	.09	16-48-0	100,935	151,455	.65	.95
6-8-6	95,106	81,587	.62	.52	18-36-0	9,732	10,625	.07	.07
6-8-8	230,306	170,129	1.49	1.07	18-46-0	32,680	81,253	.21	.51
6-8-12	16,912	14,247	.11	.09	19-9-0	29,995	39,462	.19	.25
6-10-4	47,170	43,409	.30	.27	20-0-20	12,948	11,549	.08	.07
6-12-6	82,124	81,530	.53	.51	20-10-0	19,528	14,585	.12	.09
6-12-12	476,230	519,602	3.09	3.27	20-10-10	11,102	14,264	.07	.09
6-12-18	13,605	16,282	.09	.10	20-20-0	32,548	21,524	.21	.14
6-18-6	57,251	65,642	.37	.41	23-23-0	18,763	19,079	.12	.12
6-18-18	7,974	14,206	.06	.09	24-20-0	29,047	20,319	.19	.13
6-24-12	265,848	271,137	1.72	1.71	30-10-0	17,245	35,599	.11	.23

Number of grades in class, year ended June 30,	1961	1962				
Grades of 10,000 tons or more...........	131	137	14,177,392	14,369,970	91.78	90.36
Grades of 5,000 tons to 9,999 tons	54	51	388,243	349,095	2.51	2.20
Grades of 2,500 tons to 4,999 tons	67	72	240,732	258,289	1.56	1.62
Grades under 2,500 tons.................	1,901	1,949	308,043	476,599	1.99	3.00
Not reported by grade			332,569	447,655	2.16	2.82
Total (48 States and Dist. of Col.)	2,153	2,209	15,446,979	15,901,608	100.00	100.00

[1] Excludes Alaska, Hawaii, and Puerto Rico. [2] Consumed in amounts of 10,000 or more tons in year ended June 30, 1962.

Table 5. - Grades of fertilizer mixtures consumed, by region and State, year ended June 30, 1962

State	Consumption of 15 principal grades in indicated region (tons)															Other grades No.1/	Other grades Tons2/	Total tons
	New England																	
	8-12-12	10-10-10	8-16-16	5-10-10	10-15-15	11-12-14	15-10-10	0-15-30	10-6-4	0-25-25	6-5-6	5-10-5	8-6-4	6-9-12	5-8-7			
Maine	59,352	25,754	11,728	4,117	17,267	14,851	1,524	1,232	296	103	0	399	50	6,070	1,186	41	15,732	159,661
New Hampshire	653	2,145	3,725	1,308	178	0	1,280	1,076	396	124	0	207	231	0	339	30	2,318	13,980
Vermont	306	8,008	7,016	2,464	140	0	4,506	3,442	51	7,867	0	87	96	0	5	41	5,997	39,985
Massachusetts	1,138	10,094	4,484	10,400	0	0	3,257	1,091	4,210	0	0	2,515	2,659	0	1,676	14	23,892	65,416
Rhode Island	1,589	1,667	458	4,521	414	0	337	203	417	49	0	367	1,781	0	119	28	2,665	14,587
Connecticut	200	9,880	1,928	6,178	250	0	3,776	2,759	3,513	256	8,308	2,755	1,317	0	570	76	16,013	57,703
Total	63,238	57,548	29,339	28,988	18,249	14,851	14,680	9,803	8,883	8,399	8,308	6,330	6,134	6,070	3,895	110	66,617	351,332
	Middle Atlantic																	
	5-10-10	10-10-10	5-10-5	8-16-16	0-20-20	6-12-12	10-6-4	6-12-6	16-8-8	5-10-15	0-15-30	4-8-12	3-12-12	3-12-6	12-12-12			
New York	103,681	79,344	76,310	63,927	21,044	16,021	20,253	27,753	13,064	10,302	5,832	282	1,853	164	17,592	125	61,522	518,944
New Jersey	82,248	18,020	16,915	2,554	2,668	10,870	12,849	2,698	4,841	5,741	1,116	581	793	143	373	94	50,794	213,204
Pennsylvania	226,012	82,596	16,896	38,446	34,606	15,096	7,188	1,593	9,121	2,325	12,709	6,155	6,321	13,631	2,888	187	105,768	581,351
Delaware	24,790	13,891	521	3,891	1,325	4,491	472	35	382	8,523	2,176	433	1,259	95	97	93	21,301	83,682
Dist. of Col.	131	108	1,137	0	0	4	1,417	7	0	0	0	6	0	5	0	17	329	3,144
Maryland	94,008	40,269	17,887	9,199	5,377	3,526	5,593	312	2,693	2,481	7,108	18,144	11,847	5,290	127	127	69,878	293,739
West Virginia	28,856	4,601	1,796	299	5,656	210	575	5	269	696	105	80	227	2,703	872	60	13,371	60,321
Total	559,726	238,829	131,462	118,316	70,676	50,218	48,347	32,403	30,370	30,068	29,046	25,681	22,300	22,031	21,949	305	322,963	1,754,385
	South Atlantic																	
	4-12-12	5-10-10	3-9-9	5-10-15	2-12-12	4-8-12	10-10-10	6-6-6	8-8-8	0-10-20	4-8-8	3-9-18	8-4-8	4-10-6	6-8-6			
Virginia	0	203,867	59,850	6,972	91,527	6,212	56,950	0	7,224	36,103	0	24,739	0	0	18,795	25	138,513	650,752
North Carolina	8,120	407,403	387,034	991	111,938	96,332	31,750	0	49,626	14,225	214	29,688	0	0	21,758	21	174,741	1,333,820
South Carolina	191,602	61,278	51,759	9,101	0	58,384	13,190	0	6,278	11,972	0	24,271	0	69,561	4,732	35	108,420	610,548
Georgia	499,890	6,073	37,483	335,554	4,596	12,424	7,904	6	6,122	17,953	28,356	2,300	0	17	19,235	150	162,433	1,140,346
Florida	76,580	5,670	6,148	15,934	3,548	6,566	37,804	112,334	26,050	10,071	57,767	204	76,890	0	3,483	1,224	971,499	1,404,400
Total	776,192	684,291	542,274	368,552	211,609	179,918	147,598	112,340	95,300	90,324	86,337	81,202	76,890	69,578	68,003	1,421	1,555,606	5,139,866
	East North Central																	
	5-20-20	12-12-12	4-16-16	6-24-12	6-24-24	3-12-12	7-28-14	10-10-10	0-20-20	5-10-10	16-8-8	10-6-4	14-14-14	6-18-6	3-9-27			
Ohio	163,445	173,287	25,270	118,881	7,493	83,560	2,628	19,899	31,371	61,140	20,985	16,199	4,208	6,480	174	180	127,505	862,525
Indiana	235,598	148,007	71,151	23,549	71,117	15,665	8,573	15,065	27,337	1,161	11,894	3,672	13,510	6,864	11,550	303	151,905	816,618
Illinois	83,337	82,176	60,156	9,702	42,187	9,627	116,401	60,757	23,496	34	18,714	5,234	10,458	18,551	8,634	175	193,434	742,898
Michigan	141,776	122,935	60,324	65,475	13,487	31,656	894	5,981	4,923	1,447	6,161	18,378	3,568	1,463	438	88	90,468	569,374
Wisconsin	94,483	9,148	17,880	2,399	63,288	13,539	1,906	25,364	10,505	109	1,082	1,069	2,632	728	11,179	96	94,157	349,468
Total	718,639	535,553	234,781	220,006	197,572	154,047	130,402	127,066	97,632	63,891	58,836	44,552	34,376	34,086	31,975	443	657,469	3,340,883
	West North Central																	
	12-12-12	5-20-20	6-24-24	16-48-0	5-20-10	18-46-0	6-24-12	10-10-10	8-24-8	8-32-16	10-20-10	8-24-12	6-18-6	7-28-14	0-20-20			
Minnesota	9,575	62,200	52,830	6,928	8,264	11,661	38,339	11,787	0	12,419	790	25,761	3,894	10,621	6,347	154	137,884	399,300
Iowa	20,659	83,396	37,506	14,897	54,202	19,970	7,329	24,613	119	14,675	6,414	1,219	17,728	7,833	11,972	369	160,509	483,041
Missouri	183,799	22,034	21,376	2,542	716	4,182	1,609	5,979	22,625	5,871	8,309	0	1,258	4,873	3,377	40	208,947	497,497
North Dakota	242	105	1	7,782	50	2,063	203	0	0	1,178	179	670	243	29	0	61	39,669	52,414
South Dakota	164	9	0	1,768	48	3,123	58	10	0	83	182	161	210	1	6	82	14,828	20,651
Nebraska	904	463	63	15,588	1,112	3,045	24	316	789	2,182	1,584	300	2,024	23	201	198	50,243	78,861
Kansas	5,245	613	426	56,171	2	4,649	0	816	15,646	324	13,340	0	53	18	444	45	53,611	151,358
Total	220,588	168,820	112,202	105,676	64,394	48,693	47,562	43,521	39,179	36,732	30,798	28,111	25,410	23,398	22,347	525	665,691	1,683,122

East South Central

	4-12-12	6-12-12	5-10-15	6-8-8	10-10-10	0-14-14	4-12-8	8-8-8	13-13-13	5-10-5	0-20-20	5-20-20	0-16-8	6-24-24	5-10-10			
Kentucky	1,239	36,335	128,274	0	61,165	5	75,194	1,290	69	2,244	11,576	41,999	0	1,732	9,485	116	123,901	494,508
Tennessee	1,035	314,389	37,265	278	17,105	276	5,896	724	1,411	3,000	8,599	3,082	16	733	9,971	121	83,733	487,523
Alabama	416,564	17,089	181	3,128	22,169	79,581	0	70,696	15,279	86	8,113	38	40,423	15,621	91	41	68,016	757,075
Mississippi	72	7,123	0	128,261	483	1,808	0	6,052	32,809	41,968	17,125	12	1,740	12,261	10,739	44	70,113	330,566
Total	418,910	374,936	165,720	131,667	100,922	81,670	81,090	78,772	49,568	47,298	45,413	45,131	42,179	30,347	30,286	201	345,763	2,069,672

West South Central

	10-20-10	12-12-12	8-8-8	6-12-6	12-24-12	6-24-24	0-20-20	16-48-0	7-21-0	13-13-13	10-20-0	0-24-24	5-20-20	6-8-12	5-10-10			
Arkansas	35,095	24,924	2,168	8,156	424	5,129	13,354	98	0	4,008	1,467	15,245	1,401	12,992	1,257	60	80,642	206,360
Louisiana	8,810	34,275	35,651	4,505	2,024	18,895	9,279	0	0	9,664	9	671	8,596	12	6,030	80	40,804	179,225
Oklahoma	56,681	1,119	168	3,559	6,280	1,966	1,481	15,758	0	774	10,468	0	2,521	0	823	63	24,890	126,488
Texas	157,607	6,777	12,449	24,337	22,724	3,519	1,041	6,799	21,873	6,612	8,612	1	1,207	13	3,301	259	144,382	421,254
Total	258,193	67,095	50,436	40,557	31,452	29,509	25,155	22,655	21,873	21,058	20,556	15,917	13,725	13,017	11,411	327	290,718	933,327

Mountain

	8-24-0	24-20-0	16-48-0	20-20-0	10-20-5	25-25-0	6-10-4	18-46-0	29-14-0	7-21-0	20-10-0	16-16-8	23-23-0	10-20-0	10-16-8			
Montana	489	662	578	1,865	0	70	273	0	0	0	523	329	525	0	0	16	569	5,883
Idaho	9,224	7,586	716	829	0	3,763	165	0	0	2,535	386	187	1,372	378	1,395	33	3,652	32,188
Wyoming	0	0	470	106	0	17	0	0	0	0	8	70	235	0	0	15	244	1,150
Colorado	0	4	4,671	552	0	458	456	3,407	0	0	107	499	0	250	508	103	14,549	25,461
New Mexico	131	0	396	374	132	7	87	646	2,939	335	19	155	0	416	0	43	5,283	10,920
Arizona	565	176	2,431	4,432	6,979	1,920	311	4	0	0	1,458	369	0	1,028	0	54	11,375	31,048
Utah	0	1,603	197	16	0	52	3,094	0	0	0	281	498	0	4	23	33	3,912	9,680
Nevada	0	0	0	85	0	23	315	0	0	0	37	120	0	0	0	25	905	1,485
Total	10,409	10,031	9,459	8,259	7,111	6,310	4,701	4,057	2,939	2,870	2,819	2,227	2,132	2,076	1,926	198	40,489	117,815

Pacific

	19-9-0	10-10-10	8-24-0	6-4-2	10-20-20	14-14-14	6-10-4	10-10-5	16-16-8	6-20-20	15-8-4	12-12-12	20-20-0	20-10-0	5-10-10			
Washington	0	2,944	9,155	0	8,318	6,322	5,526	0	6,249	4,417	0	479	1,617	2,382	6,188	106	38,661	92,258
Oregon	1,036	430	7,446	0	5,668	1,012	1,770	0	1,605	3,786	0	680	1,272	472	641	99	25,191	51,009
California	38,400	27,576	7,475	14,254	0	6,419	4,752	11,521	2,951	1,501	9,210	7,329	4,147	4,093	0	3/ 17	228,311	367,939
Total	39,436	30,950	24,076	14,254	13,986	13,753	12,048	11,521	10,805	9,704	9,210	8,488	7,036	6,947	6,829	190	292,163	511,206

Other4/

	14-4-10	15-4-7	12-6-10	12-6-16	12-6-8	10-10-20	20-0-33	10-15-10	16-4-5	13-3-12	9-25-15	14-2-8	9-10-5	12-8-10	12-4-10			
Puerto Rico	9,921	2,056	1,435	1,403	1,258	1,123	877	873	762	688	621	506	489	423	415	27	195,698	218,548

United States5/

	5-10-10	4-12-12	5-20-20	12-12-12	10-10-10	5-10-15	3-9-9	6-12-12	6-24-24	10-20-10	6-24-12	0-20-20	8-8-8	3-12-12	5-10-5			
New England	28,988	0	342	3,412	57,548	0	0	653	0	471	188	3,725	93	15	6,330	114	249,567	351,332
Mid. Atlantic	559,726	14,252	9,119	21,949	238,829	30,068	477	50,218	1,588	17,184	2,055	70,676	15,267	22,300	131,462	305	569,215	1,754,385
So. Atlantic	684,291	776,192	202	3,780	147,598	368,552	542,274	54,796	1,218	815	0	2,116	95,300	35,708	41,985	1,422	2,385,039	5,139,866
E. No. Central	63,891	374	718,639	535,553	127,066	12,741	31	24,200	197,572	6,471	220,006	97,632	6,840	154,047	10,055	443	1,165,765	3,340,883
W. No. Central	727	1,104	168,820	220,588	43,521	0	1	7,878	112,202	30,798	47,562	22,347	5,492	9,292	3,892	526	1,008,898	1,683,122
E. So. Central	30,286	418,910	45,131	29,145	100,922	165,720	109	374,936	30,347	1,943	776	45,413	78,772	17,332	47,298	201	682,632	2,069,672
W. So. Central	11,411	528	13,725	67,095	6,134	449	0	6,858	29,509	258,193	550	25,155	50,436	10,810	2,045	328	450,429	933,327
Mountain	4	0	22	98	472	0	174	0	35	1,830	0	284	0	0	186	204	114,710	117,815
Pacific	6,829	0	110	8,488	30,950	0	0	63	0	5,431	0	1,083	0	0	2,569	197	455,683	511,206
Total	1,386,153	1,211,360	956,110	890,108	753,040	577,530	543,066	519,602	372,471	323,136	271,137	268,431	252,200	249,504	245,822	2,194	7,081,938	15,901,608

1/ Excludes mixtures not reported by grade. 2/ Includes tonnage of mixtures not reported by grade. 3/ Total number of mixtures exceeds 500 of which only 30 were reported by grade. 4/ Total consumption of mixtures in Alaska was 2,040 tons (principal grades: 10-20-20, 8-32-16, 15-32-15) and in Hawaii 83,107 tons, comprising 34 grades, most of which were manufactured to consumers' specifications. Consumption in other noncontiguous areas was negligible. 5/ Excludes Alaska, Hawaii, and Puerto Rico.

Table 6. - Primary-nutrient ratios of mixtures totaling 50,000 or more tons in United States and consumption in region, year ended June 30, 1962

Primary-nutrient ratio[1]	New England	Middle Atlantic	South Atlantic	East North Central	West North Central	East South Central	West South Central	Mountain	Pacific	Alaska, Hawaii, and Puerto Rico	United States
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
0:1:1	12,124	83,011	66,209	125,316	42,824	130,683	46,793	284	1,131	0	508,375
0:1:2	9,807	32,024	102,664	863	93	11,906	10,353	0	30	0	167,740
0:1:3	2,152	7,649	10,367	52,805	9,830	17,274	79	0	0	0	100,156
0:2:1	0	1,411	6,665	4,254	18,492	43,182	2,724	78	0	0	76,806
1:0:1	0	62	160,003	1,223	0	5,251	1,248	0	0	0	167,787
1:1:0	0	352	46	254	39,727	416	14,240	17,745	10,301	17	83,098
1:1:1	67,137	286,583	362,837	759,025	326,781	279,391	157,864	2,113	63,009	1,805	2,306,545
1:2:0	0	85	10	55	33,641	50	21,618	2,870	102	0	58,431
1:2:1	6,860	185,331	56,066	19,370	56,688	56,701	337,169	2,354	8,138	210	728,887
1:2:2	60,481	751,521	843,824	115,778	29,894	413,510	28,726	19	21,420	4,269	2,269,442
1:2:3	0	57,114	548,883	14,697	1,501	179,255	534	0	0	0	801,984
1:3:0	0	460	0	17,696	123,810	1,306	48,569	25,159	24,076	30	241,106
1:3:1	326	9,781	112	40,054	98,597	3,228	5,326	2,384	7,272	63	167,143
1:3:2	767	1,321	405	3,442	3,223	98,703	4,946	1	307	0	113,115
1:3:3	1	21,512	1,320,321	437	5,647	436,425	538	174	0	0	1,785,055
1:3:6	0	1,085	82,276	5,901	3,243	7,351	4,299	0	0	0	104,155
1:4:2	188	4,965	8,642	386,461	128,872	69,137	3,793	798	380	408	603,644
1:4:4	363	33,773	37,216	1,305,039	296,055	93,698	54,120	57	1,882	0	1,822,203
1:6:6	0	19,215	226,589	15	0	679	0	0	0	0	246,498
2:1:1	4,679	41,049	24,691	72,788	24,069	2,827	7,444	766	2,144	1	180,458
2:1:2	3,600	564	78,639	330	2,962	914	5,733	0	602	5	93,349
2:2:1	0	128	820	544	11,879	191	12,063	4,991	34,674	360	65,650
2:3:3	81,493	826	14,314	124	2	0	0	0	0	0	96,759
2:5:3	2	27	69,578	0	0	0	0	0	0	0	69,607
3:2:2	14,680	20,479	563	11,300	21,898	5,113	25	7	730	30	74,825
3:2:4	0	0	67,760	0	0	0	0	0	0	0	67,760
3:4:3	123	1,854	68,302	3	3	11,604	0	0	0	0	81,889
3:4:4	3,034	296	34,933	33	7	166,649	521	0	0	0	205,473
4:2:1	4,924	15,540	867	13,569	12,032	472	567	2,013	929	0	50,913
4:7:5	0	0	62,973	0	0	0	0	0	0	0	62,973
4:9:3	0	0	54,548	0	0	375	0	0	0	0	54,923
5:3:2	8,883	48,347	7,042	44,596	6,087	1,718	310	892	4,877	0	122,752
7:2:5	0	0	0	0	0	0	0	0	0	60,846	60,846
9:23:0	0	119	91	21,294	48,693	2,022	4,977	4,057	0	808	82,061
Other[2]	69,708	127,901	821,610	323,617	336,572	29,641	158,748	51,053	329,202	234,843	2,482,895
Total	351,332	1,754,385	5,139,866	3,340,883	1,683,122	2,069,672	933,327	117,815	511,206	303,695	16,205,303

1/ N: available P_2O_5: K_2O. 2/ All other mixtures including those not reported by grade.

Table 7. - Average primary-nutrient content of mixtures and direct-application materials consumed, by State and region, year ended June 30, 1962[1]

State and region	Mixtures[2]				Materials					Total in mixtures and materials
					Single nutrient[3]			Multiple nutrient [2]	Total	
	N	Available P_2O_5	K_2O	Total	N	Available P_2O_5[4]	K_2O			
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Maine	8.74	12.37	12.87	33.98	32.28	20.52	55.07	11.92	24.73	33.60
New Hampshire	7.90	12.99	14.23	35.12	32.66	20.92	59.50	10.30	24.01	32.88
Vermont	6.38	15.60	17.65	39.63	35.46	20.24	61.09	14.33	21.99	34.71
Massachusetts	8.96	9.78	9.27	28.01	23.34	20.53	59.15	11.07	17.34	26.13
Rhode Island	7.69	9.48	10.00	27.17	24.76	19.43	60.20	11.88	16.37	25.95
Connecticut	8.17	9.80	10.19	28.16	30.13	24.77	48.02	11.27	18.25	25.85
New England	8.34	11.74	12.24	32.32	28.94	21.11	53.87	11.26	20.06	30.55
New York	7.20	12.49	11.11	30.80	29.36	21.90	51.22	12.45	24.93	30.12
New Jersey	6.69	10.52	10.76	27.97	26.81	24.11	55.57	11.89	24.56	27.60
Pennsylvania	6.28	12.50	11.40	30.18	30.90	22.61	57.50	13.13	25.74	29.62
Delaware	6.35	11.23	12.87	30.45	31.05	18.63	59.31	8.59	28.03	30.24
Dist. of Columbia	8.21	8.83	5.54	22.58	15.58	17.47	56.11	8.74	10.55	19.20
Maryland	5.88	11.23	11.96	29.07	36.72	17.06	32.82	16.94	31.95	29.31
West Virginia	4.88	12.60	11.70	29.18	22.04	24.22	59.49	10.41	24.10	28.29
Middle Atlantic	6.49	11.98	11.40	29.87	30.64	22.29	51.41	12.57	25.98	29.44
Virginia	4.43	11.09	12.06	27.58	26.39	23.85	25.49	16.17	25.27	27.29
North Carolina	4.63	9.39	10.79	24.81	25.86	19.86	32.93	19.81	26.03	25.02
South Carolina	4.45	10.15	11.59	26.19	21.16	16.33	57.38	16.88	22.81	25.36
Georgia	4.77	10.56	12.96	28.29	29.83	17.78	56.64	24.64	29.84	28.63
Florida	6.51	6.24	9.93	22.68	27.46	13.32	36.74	16.08	23.95	22.83
South Atlantic	5.13	9.10	11.29	25.52	26.54	17.98	37.06	17.26	26.12	25.58
Ohio	7.16	16.64	13.42	37.22	35.58	22.11	58.87	28.59	35.00	36.85
Indiana	7.30	18.08	17.08	42.46	44.22	25.55	60.25	49.68	45.66	43.47
Illinois	7.87	19.38	13.76	41.01	39.25	10.24	60.17	33.84	25.71	32.70
Michigan	7.28	16.97	14.50	38.75	43.80	20.29	57.04	24.18	40.00	38.94
Wisconsin	5.50	17.73	21.93	45.16	44.52	40.10	60.15	14.21	47.28	45.55
East North Central	7.20	17.77	15.46	40.43	40.94	12.46	59.94	30.86	33.32	38.11
Minnesota	7.57	23.29	15.84	46.70	41.27	41.32	60.31	40.12	43.30	45.73
Iowa	8.87	21.66	12.30	42.83	43.64	37.84	61.16	39.32	43.27	43.03
Missouri	10.57	14.92	12.88	38.37	44.34	6.68	60.74	30.32	27.38	33.79
North Dakota	17.32	29.38	2.78	49.48	36.74	46.24	59.08	51.36	48.06	48.50
South Dakota	18.25	26.92	1.00	46.17	36.39	45.15	61.10	42.57	40.03	41.96
Nebraska	13.99	27.60	2.88	44.47	51.01	43.06	56.72	49.04	50.21	49.22
Kansas	13.62	31.20	5.18	50.00	38.33	44.24	61.02	38.18	38.87	42.23
West North Central	10.11	21.49	11.80	43.40	44.32	26.27	60.64	44.03	41.03	42.18
Kentucky	6.12	13.67	13.22	33.01	36.99	26.06	54.09	38.96	36.24	33.71
Tennessee	6.39	12.24	12.66	31.29	35.93	27.36	40.61	39.18	35.38	32.27
Alabama	5.14	12.66	12.45	30.25	28.28	13.91	59.48	37.52	26.88	29.42
Mississippi	7.08	11.37	10.59	29.04	38.00	15.29	59.90	41.60	33.79	31.47
East South Central	5.98	12.60	12.38	30.96	34.48	18.91	52.00	39.13	32.51	31.42
Arkansas	7.50	16.39	16.43	40.32	38.13	37.10	60.13	35.31	41.33	40.82
Louisiana	8.13	14.77	12.85	35.75	39.38	18.17	50.75	32.19	37.77	36.68
Oklahoma	10.87	23.14	7.69	41.70	37.09	29.24	59.28	41.09	36.86	38.76
Texas	10.21	18.27	7.94	36.42	54.21	28.20	40.26	38.60	46.02	42.09
West South Central	9.30	17.84	10.73	37.87	46.22	28.57	57.17	38.87	42.87	40.58
Montana	18.23	22.11	1.24	41.58	37.76	46.34	58.75	45.78	44.06	43.77
Idaho	16.24	21.41	0.88	38.53	33.58	44.71	61.48	42.79	37.37	37.60
Wyoming	18.58	32.66	1.63	52.87	42.61	46.33	26.79	53.23	46.39	46.87
Colorado	15.41	30.40	4.20	50.01	41.36	47.49	51.30	23.23	35.85	38.31
New Mexico	18.92	18.42	2.65	39.99	47.30	36.75	57.83	43.82	43.01	42.48
Arizona	15.04	22.26	3.28	40.58	42.31	37.04	50.60	39.95	41.46	41.32
Utah	15.56	15.83	2.64	34.03	36.39	40.61	60.45	32.33	37.48	36.69
Nevada	13.26	12.70	3.70	29.66	39.92	45.55	0	37.87	39.82	37.70
Mountain	16.02	22.88	2.60	41.50	39.76	42.87	54.17	35.80	39.53	39.87
Washington	10.18	16.21	9.14	35.53	36.06	37.69	56.64	37.31	37.03	36.63
Oregon	10.81	18.09	9.15	38.05	28.45	23.16	50.89	36.92	30.26	31.97
California	12.47	11.94	4.65	29.06	31.52	26.22	54.27	15.76	25.82	26.56
Pacific	11.89	13.32	5.91	31.12	31.98	27.10	54.51	19.12	28.00	28.74
Average for 48 States & D. C.	6.96	13.82	12.13	32.91	37.38	21.61	54.83	28.86	34.19	33.37
Alaska	9.58	25.28	17.87	52.73	33.70	43.58	50.83	58.94	38.46	44.32
Hawaii	15.66	9.79	23.84	49.29	31.41	17.46	58.93	58.97	33.36	41.82
Puerto Rico	12.10	6.39	11.24	29.73	24.78	32.21	58.26	70.40	26.11	29.18
United States: 1961-62	7.08	13.70	12.17	32.95	37.24	21.60	54.90	28.92	34.15	33.38
1960-61	6.81	13.15	11.97	31.93	36.37	19.55	55.48	27.93	32.65	32.18
1959-60	6.50	12.99	12.06	31.55	35.57	20.38	55.78	27.85	32.18	31.76

[1] Includes only fertilizers guaranteed to contain 1 or more primary nutrients, N, P_2O_5, or K_2O. [2] Guaranteed to contain 2 or more of the primary nutrients. [3] Guaranteed to contain 1 of the primary nutrients. [4] Includes 2 percent of the colloidal phosphate and 3 percent of the phosphate rock.

Table 8. - Direct-application fertilizer materials consumed, by State and region, year ended June 30, 1962[1]

State and region	Chemical nitrogen materials										Natural organics[2]
	Ammonia		Ammonium nitrate	Ammonium nitrate-limestone mixtures	Ammonium sulfate	Calcium cyanamide	Nitrogen solutions	Sodium nitrate	Urea	Other[2]	
	Anhydrous	Aqua									
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Maine	0	0	1,872	0	27	179	479	133	186	23	847
New Hampshire	0	0	595	0	7	12	178	25	172	21	594
Vermont	0	0	526	0	0	1	287	11	317	8	109
Massachusetts	0	0	1,304	0	110	102	147	538	469	13	7,833
Rhode Island	0	0	64	0	1	98	3	28	94	46	1,139
Connecticut	0	0	347	2	13	116	674	262	292	121	10,070
New England	0	0	4,708	2	158	508	1,768	997	1,530	232	20,592
New York	291	0	12,055	639	347	1,831	4,128	3,160	3,399	587	12,518
New Jersey	226	0	3,637	425	1,282	1,386	1,973	1,834	1,191	315	6,807
Pennsylvania	858	0	7,458	331	6,630	689	6,779	1,269	4,402	503	14,111
Delaware	0	0	437	40	1	926	2,668	71	449	20	1,570
District of Columbia	0	0	20	0	2	0	0	11	5	9	1,057
Maryland	2,498	0	2,907	367	62	973	6,582	2,832	1,170	94	1,608
West Virginia	0	0	681	64	301	16	34	1,713	150	20	372
Middle Atlantic	3,873	0	27,195	1,866	8,625	5,821	22,164	10,890	10,766	1,548	38,043
Virginia	471	0	5,458	15,581	620	1,041	18,503	10,837	819	480	3,459
North Carolina	4,134	0	16,699	78,602	53	3,144	61,838	60,824	1,513	30	3,807
South Carolina	2,047	0	13,134	55,114	269	238	42,497	56,945	342	383	1,537
Georgia	16,421	69	87,383	34,068	2,520	312	105,573	54,551	122	890	3,422
Florida	4,040	0	25,940	5,753	4,003	1,773	29,164	19,641	2,218	11,488	24,373
South Atlantic	27,113	69	148,614	189,118	7,465	6,508	257,575	202,798	5,014	13,271	36,598
Ohio	11,606	3,082	18,296	52	19,705	144	44,382	680	18,801	813	9,191
Indiana	56,016	16,230	38,868	86	9,907	162	114,464	142	21,775	842	2,605
Illinois	61,997	12,723	82,675	84	53,770	42	76,272	86	5,292	1,596	10,990
Michigan	13,830	18	17,698	0	3,463	207	18,309	1,495	9,694	14	12,668
Wisconsin	5,153	54	7,186	0	1,747	0	10,244	0	2,743	338	7,669
East North Central	148,602	32,107	164,723	222	88,592	555	263,671	2,403	58,305	3,603	43,123
Minnesota	15,050	900	18,198	0	235	0	43,148	0	857	180	6,544
Iowa	55,105	21,430	78,430	0	3,838	0	108,026	0	3,938	1,027	2,101
Missouri	37,253	599	83,401	0	536	0	36,758	438	5,872	0	2,783
North Dakota	1,390	43	9,295	0	980	0	2,767	158	69	30	34
South Dakota	1,193	1,082	16,195	0	64	0	2,197	0	1,663	141	494
Nebraska	124,712	17,518	74,946	0	1,102	85	101,745	0	4,793	926	1,055
Kansas	21,543	89	111,675	0	944	0	99,687	12	12,180	38	825
West North Central	256,246	41,661	392,140	0	7,699	85	394,328	608	29,372	2,342	13,836
Kentucky	7,500	0	43,405	847	807	1,694	11,937	3,183	1,202	107	690
Tennessee	17,114	0	50,635	38	2,875	1,511	11,150	26,704	257	1,355	1,764
Alabama	7,787	0	77,023	30,940	7,351	0	17,221	57,376	718	312	401
Mississippi	44,029	239	117,798	7,390	2,345	4,715	23,840	49,304	2,653	1,567	172
East South Central	76,430	239	288,861	39,215	13,378	7,920	64,148	136,567	4,830	3,341	3,027
Arkansas	21,156	694	53,090	301	2,132	3,491	18,140	29,496	22,601	5	167
Louisiana	26,113	5,260	44,761	46	12,848	950	10,706	20,788	8,166	4	703
Oklahoma	5,144	0	32,126	0	2,017	0	19,302	447	12,951	90	1,203
Texas	163,220	9,788	56,466	0	68,862	150	20,925	1,702	24,697	375	2,179
West South Central	215,633	15,742	186,443	347	85,859	4,591	69,073	52,433	68,415	474	4,252
Montana	1,290	1,010	7,918	0	445	0	83	0	57	35	139
Idaho	10,706	24,469	22,245	0	16,928	40	6,998	0	1,477	314	314
Wyoming	1,173	55	3,530	0	269	0	874	0	527	32	58
Colorado	10,904	370	32,032	50	4,577	4	4,068	0	2,356	4,388	31,899
New Mexico	6,520	0	1,968	0	4,682	0	4,294	0	6,218	62	612
Arizona	29,155	12,943	8,184	0	14,257	1,011	13,415	562	22,208	12,211	3,691
Utah	1,358	7	8,214	0	3,218	0	142	0	1,141	389	1,400
Nevada	683	647	396	0	680	0	206	0	138	15	320
Mountain	61,789	39,501	84,487	50	45,056	1,055	30,080	562	34,122	17,446	38,433
Washington	33,679	60,921	28,132	80	24,449	246	32,438	50	5,739	2,668	6,064
Oregon	5,422	30,779	14,243	6	52,909	407	6,310	0	15,847	2,024	1,884
California	105,034	236,507	45,366	0	200,601	3,951	49,420	458	31,927	20,833	[3] 321,984
Pacific	144,135	328,207	87,741	86	277,959	4,604	88,168	508	53,513	25,525	329,932
48 States & D. C.	933,821	457,526	1,384,912	230,906	534,791	31,647	1,190,975	407,766	265,867	67,782	527,836
Alaska	0	0	2,265	0	0	0	0	0	40	0	0
Hawaii	922	28,380	592	6	3,368	4	4	16	20,897	106	0
Puerto Rico	0	10,397	0	0	19,542	0	0	10	5,818	0	0
United States: 1961-62	934,743	496,303	1,387,769	230,912	557,701	31,651	1,190,979	407,792	292,622	67,888	527,836
1960-61	811,490	432,494	1,324,569	241,363	552,264	38,198	948,785	407,766	203,934	79,199	526,865
1959-60	708,798	427,062	1,231,294	263,999	534,795	42,266	650,259	454,341	142,198	87,898	491,464

[1] Excludes liming materials used in the manufacture of commercial mixtures. [2] The principal kinds are shown separately, by region in table 1. [3] Includes an estimate of 278,000 tons of dried manures.

Table 8. - Direct-application fertilizer materials consumed, by State and region, year ended June 30, 1962 - Continued

State and region	Phosphate materials					Potash materials		Total primary-nutrient materials	Secondary- and trace-nutrient materials		Total all materials
	Phosphate rock1/	Superphosphates		Ammoniated phosphate2/	Other3/	Chloride 50-62 percent grades	Other3/		Gypsum	Other3/	
		Grades 22 percent and under	Grades over 22 percent								
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Maine	0	2,958	0	10	117	81	62	6,974	0	26	7,000
New Hampshire	0	1,752	0	0	60	114	6	3,536	0	8	3,544
Vermont	115	13,783	16	0	46	241	5	15,465	0	11	15,476
Massachusetts	79	2,241	65	0	652	347	57	13,957	25	4	13,986
Rhode Island	6	205	0	0	145	15	0	1,844	0	7	1,851
Connecticut	67	3,598	403	18	619	287	598	17,487	10	20	17,517
New England	267	24,537	484	28	1,639	1,085	728	59,263	35	76	59,374
New York	333	22,742	714	4	626	1,429	2,814	67,617	58	338	68,013
New Jersey	172	2,832	697	76	745	1,323	269	25,190	238	135	25,563
Pennsylvania	1,987	25,678	4,068	1,074	995	3,589	934	81,355	0	4,117	85,472
Delaware	394	299	0	1	186	681	9	7,752	71	409	8,232
District of Columbia	7	55	0	0	42	11	7	1,226	7	7	1,240
Maryland	1,429	2,458	62	132	557	1,054	1,100	25,885	424	22	26,331
West Virginia	132	7,756	944	6	349	270	3	12,811	16	44	12,871
Middle Atlantic	4,454	61,820	6,485	1,293	3,500	8,357	5,136	221,836	814	5,072	227,722
Virginia	1,905	15,249	3,423	414	935	5,143	12,234	96,572	16,250	600	113,422
North Carolina	831	13,553	271	172	2,816	10,186	17,894	276,367	61,687	40	338,094
South Carolina	358	10,909	1	90	4,385	9,834	1,440	199,523	3,997	98	203,618
Georgia	95	4,218	299	918	2,661	3,614	1,485	318,621	50,259	449	369,329
Florida	7,975	7,799	354	117	11,793	5,301	30,540	192,272	3,448	4,347	200,067
South Atlantic	11,164	51,728	4,348	1,711	22,590	34,078	63,593	1,083,355	135,641	5,534	1,224,530
Ohio	6,375	14,797	6,206	5,507	764	14,949	1,114	176,464	592	561	177,617
Indiana	14,700	5,002	15,721	9,640	561	70,365	1,259	378,345	0	264	378,609
Illinois	388,241	14,965	71,080	9,190	2,568	92,998	369	884,938	40	223	885,201
Michigan	2,110	5,417	869	3,862	596	9,827	2,260	102,337	482	1,239	104,058
Wisconsin	1,177	1,842	3,648	735	2,587	32,310	455	77,888	20	125	78,033
East North Central	412,603	42,023	97,524	28,934	7,076	220,449	5,457	1,619,972	1,134	2,412	1,623,518
Minnesota	707	5,494	27,244	23,216	266	18,424	448	160,911	57	4	160,972
Iowa	2,920	23,699	48,300	15,885	2,187	21,647	4	388,537	14	1,099	389,650
Missouri	150,919	1,503	11,907	2,406	1,476	18,519	15	354,385	90	18	354,493
North Dakota	40	646	32,017	68,003	14	112	30	115,628	9	1	115,638
South Dakota	190	205	6,789	14,519	9	333	0	45,074	0	0	45,074
Nebraska	965	4,135	27,722	21,921	2,569	1,714	220	386,128	56	158	386,342
Kansas	1,107	141	24,825	53,699	66	1,428	2	328,261	35	16	328,312
West North Central	156,848	35,823	178,804	199,649	6,587	62,177	719	1,778,924	261	1,296	1,780,481
Kentucky	9,157	20,195	6,535	1,779	6,407	12,615	8,722	136,782	2	234	137,018
Tennessee	1,927	10,476	2,601	1,808	6,239	10,165	8,119	154,738	1	90	154,829
Alabama	1,222	20,264	242	497	18,623	6,925	690	247,592	3,516	16	251,124
Mississippi	2,477	31,498	2,256	572	40,916	13,906	552	346,229	30	55	346,314
East South Central	14,783	82,433	11,634	4,656	72,185	43,611	18,083	885,341	3,549	395	889,285
Arkansas	846	4,793	10,453	1,866	511	30,053	68	199,863	140	10	200,013
Louisiana	2,135	6,619	1,453	3,737	2,176	3,614	1,165	151,244	1,210	39	152,493
Oklahoma	3,516	11,859	11,227	37,465	250	1,057	32	138,686	1	0	138,687
Texas	15,621	36,455	34,436	167,427	656	1,661	2,094	606,714	2,355	2,516	611,585
West South Central	22,118	59,726	57,569	210,495	3,593	36,385	3,359	1,096,507	3,706	2,565	1,102,778
Montana	0	0	17,474	13,860	1,802	10	2	44,125	789	15	44,929
Idaho	40	1,769	19,442	19,947	4,091	673	92	129,545	11,152	1,414	142,111
Wyoming	0	0	3,969	3,739	106	9	63	14,404	0	11	14,415
Colorado	0	72	17,039	11,574	1,153	594	217	121,297	702	892	122,891
New Mexico	0	7,259	10,966	8,455	398	389	92	51,915	0	9	51,924
Arizona	0	5,318	2,035	29,833	4,886	220	699	160,628	13,735	8,029	182,392
Utah	0	2,682	10,103	3,494	185	28	0	32,361	231	70	32,662
Nevada	40	22	570	1,856	63	0	0	5,636	1,161	164	6,961
Mountain	80	17,122	81,598	92,758	12,684	1,923	1,165	559,911	27,770	10,604	598,285
Washington	161	4,615	8,370	36,872	1,397	6,864	1,420	254,165	16,024	9,810	279,999
Oregon	134	11,788	1,547	34,096	309	2,898	1,333	181,936	14,012	2,759	198,707
California	103	85,176	13,469	105,857	12,458	1,976	7,717	1,242,837	1,020,988	43,596	2,307,421
Pacific	398	101,579	23,386	176,825	14,164	11,738	10,470	1,678,938	1,051,024	56,165	2,786,127
48 States & D. C.	622,715	476,791	461,832	716,349	144,018	419,803	108,710	8,984,047	1,223,934	84,119	10,292,100
Alaska	0	5	83	482	0	10	43	2,928	0	51	2,979
Hawaii	4,444	2,925	1,905	1,658	16	7,062	1,183	73,488	0	1,679	75,167
Puerto Rico	0	1,545	1,247	69	4	616	235	39,483	2	3	39,488
United States: 1961-62	627,159	481,266	465,067	718,558	144,038	427,491	110,171	9,099,946	1,223,936	85,852	10,409,734
1960-61	808,711	492,657	438,398	652,369	171,696	411,691	96,409	8,638,858	1,113,423	80,138	9,832,419
1959-60	673,525	506,811	403,047	601,563	153,764	389,369	84,753	7,849,664	1,301,002	77,127	9,227,793

1/ Includes colloidal phosphate, the quantity of which is shown separately, by region, in table 1. 2/ Total of 11-48-0, 13-39-0, 16-20-0, 21-53-0, and 27-14-0 grades. The separate quantities of which are shown, by States, in table 10. Other similar grades included in mixtures.
3/ The principal kinds are shown separately, by region, in table 1.

Table 9. - Change in consumption of classes of direct-application fertilizer materials, by region, year ended June 30, 1962, compared with preceding year

Region	Increase or decrease (-)									
	Chemical nitrogen materials		Natural organic materials		Phosphate materials		Potash materials		Secondary- and trace-nutrient materials	
	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent	Tons	Percent
New England	-1,313	-11.71	799	4.04	-487	-1.77	71	4.08	-25	-18.38
Middle Atlantic	9,671	11.64	-1,940	-4.85	-2,115	-2.65	1,313	10.78	257	4.57
South Atlantic	57,474	7.18	1,347	3.82	-2,707	-2.87	10,481	12.02	38,508	37.51
East North Central	119,918	18.65	2,395	5.88	-129,032	-17.99	9,494	4.39	-2,093	-37.16
West North Central	111,584	11.02	3,069	28.50	-38,560	-6.26	11,891	23.31	-538	-25.68
East South Central	35,324	5.89	-171	-5.35	-26,646	-12.55	287	.47	1,568	65.99
West South Central	144,049	25.96	-4,073	-48.92	85,906	32.10	-1,238	-3.02	-104	-1.63
Mountain	16,291	5.47	8,145	26.89	-16,099	-7.31	-394	-11.32	13,169	52.25
Pacific	57,925	6.08	-8,452	-2.50	4,337	1.39	2,901	15.02	64,286	6.16
Alaska, Hawaii, and Puerto Rico	7,375	8.68	-148	-100.00	-2,340	-13.99	-5,244	-36.43	1,199	223.69
United States	558,298	11.08	971	.18	-127,743	-4.98	29,562	5.82	116,227	9.74

Table 10. - Ammoniated phosphates consumed as direct-application fertilizer materials, by State and region, year ended June 30, 1962

State and region[1]	Grade[2]				
	11-48	13-39	16-20	27-14	21-53
	Tons	Tons	Tons	Tons	Tons
Maine	0	0	0	0	10
Connecticut	0	0	0	0	18
New England	0	0	0	0	28
New York	0	0	0	0	4
New Jersey	64	0	0	0	12
Pennsylvania	827	0	0	0	247
Delaware	1	0	0	0	0
Maryland	124	0	0	0	8
West Virginia	0	0	0	0	6
Middle Atlantic	1,016	0	0	0	277
Virginia	8	0	0	79	327
North Carolina	0	0	0	0	172
South Carolina	0	0	0	0	90
Georgia	33	0	0	0	885
Florida	2	0	0	2	113
South Atlantic	43	0	0	81	1,587
Ohio	4,249	0	0	0	1,258
Indiana	9,035	0	0	0	605
Illinois	7,344	86	308	217	1,235
Michigan	1,023	0	0	0	2,839
Wisconsin	474	0	0	0	261
East North Central	22,125	86	308	217	6,198
Minnesota	10,953	2,269	6,935	2,965	94
Iowa	2,712	881	8,340	3,472	480
Missouri	977	0	827	46	556
North Dakota	39,311	1,973	21,736	4,794	189
South Dakota	2,778	63	6,847	4,765	66
Nebraska	4,679	937	10,291	844	5,170
Kansas	582	3,727	48,297	10	1,083
West North Central	61,992	9,850	103,273	16,896	7,638
Kentucky	264	0	0	913	602
Tennessee	250	112	0	376	1,070
Alabama	0	0	0	0	497
Mississippi	0	0	209	0	363
East South Central	514	112	209	1,289	2,532
Arkansas	21	105	1,740	0	0
Louisiana	75	28	3,618	0	16
Oklahoma	418	12,495	24,512	0	40
Texas	8,230	10,014	147,815	0	1,368
West South Central	8,744	22,642	177,685	0	1,424
Montana	4,663	192	6,997	1,908	100
Idaho	4,770	0	11,232	3,807	138
Wyoming	970	25	1,541	178	1,025
Colorado	588	228	1,924	86	8,748
New Mexico	1,189	813	5,313	0	1,140
Arizona	4,858	697	21,745	462	2,071
Utah	632	0	2,096	716	50
Nevada	108	41	630	992	85
Mountain	17,778	1,996	51,478	8,149	13,357
Washington	5,398	2,084	19,881	9,222	287
Oregon	1,853	1,167	30,418	455	203
California	17,349	1,667	80,192	1,355	5,294
Pacific	24,600	4,918	130,491	11,032	5,784
Alaska	480	0	0	2	0
Hawaii	1,372	0	107	0	179
Puerto Rico	5	0	0	0	64
United States	138,669	39,604	463,551	37,666	39,068

[1] Consumption was not reported for unlisted States. [2] Includes the quantities of these grades reported as mixtures. All other N-P grades except natural organics and bone meal are included in mixtures.

Table 11. - Primary nutrients contained in mixtures and the total in mixtures and direct-application materials consumed, by State and region, year ended June 30, 1962

State and region	Mixtures					Mixtures and Materials				
	N	P_2O_5		K_2O	Total N, available P_2O_5, and K_2O	N	P_2O_5		K_2O	Total N, available P_2O_5, and K_2O
		Available	Total				Available[1]	Total[2]		
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Maine	13,961	19,757	20,917	20,545	54,263	14,946	20,423	21,600	20,619	55,988
New Hampshire	1,104	1,816	1,848	1,990	4,910	1,473	2,218	2,259	2,068	5,759
Vermont	2,552	6,237	6,409	7,058	15,847	2,968	9,069	9,330	7,210	19,247
Massachusetts	5,860	6,400	6,763	6,064	18,324	7,050	7,331	7,752	6,363	20,744
Rhode Island	1,122	1,382	1,470	1,458	3,962	1,276	1,503	1,594	1,485	4,264
Connecticut	4,714	5,653	5,886	5,881	16,248	5,874	7,123	7,433	6,443	19,440
New England	29,313	41,245	43,293	42,996	113,554	33,587	47,667	49,968	44,188	125,442
New York	37,342	64,836	67,225	57,672	159,850	46,535	70,627	73,302	59,542	176,704
New Jersey	14,262	22,423	23,063	22,936	59,621	18,176	23,680	24,401	23,951	65,807
Pennsylvania	36,486	72,644	75,356	66,257	175,387	46,326	81,015	84,498	68,985	196,326
Delaware	5,311	9,397	9,748	10,769	25,477	6,831	9,598	10,066	11,221	27,650
District of Columbia	258	278	303	174	710	310	329	360	200	839
Maryland	17,289	32,990	34,034	35,139	85,418	23,919	33,891	35,370	35,877	93,687
West Virginia	2,943	7,601	8,173	7,057	17,601	3,627	9,835	10,553	7,226	20,688
Middle Atlantic	113,891	210,169	217,902	200,004	524,064	145,724	228,975	238,550	207,002	581,701
Virginia	28,836	72,167	77,016	78,515	179,518	43,363	77,549	83,063	83,009	203,921
North Carolina	61,759	125,298	135,076	143,901	330,958	121,056	128,995	139,053	152,853	402,904
South Carolina	27,182	61,958	67,132	70,781	159,921	63,549	64,598	69,963	77,277	205,424
Georgia	54,373	120,406	128,416	147,839	322,618	144,913	122,302	130,384	150,480	417,695
Florida	91,411	87,644	104,383	139,407	318,462	123,408	92,258	111,457	148,848	364,514
South Atlantic	263,561	467,473	512,023	580,443	1,311,477	496,289	485,702	533,920	612,467	1,594,458
Ohio	61,744	143,549	148,069	115,802	321,095	104,800	152,710	159,379	125,339	382,849
Indiana	59,574	147,647	151,409	139,448	346,669	175,130	161,639	169,922	182,649	519,418
Illinois	58,494	143,964	148,810	102,258	304,716	175,814	197,835	316,512	158,592	532,241
Michigan	41,431	96,643	98,005	82,558	220,632	71,135	101,092	102,323	89,337	261,564
Wisconsin	19,229	61,969	63,628	76,627	157,825	31,846	66,339	68,446	96,464	194,649
East North Central	240,472	593,772	609,921	516,693	1,350,937	558,725	679,615	816,582	652,381	1,890,721
Minnesota	30,241	93,007	94,999	63,259	186,507	66,340	115,128	117,892	74,711	256,179
Iowa	42,867	104,616	106,905	59,436	206,919	164,366	137,970	141,970	72,697	375,033
Missouri	52,569	74,234	77,578	64,054	190,857	126,183	86,357	133,555	75,332	287,872
North Dakota	9,076	15,399	15,851	1,455	25,930	23,921	56,038	57,249	1,539	81,498
South Dakota	3,770	5,560	5,707	206	9,536	14,697	12,469	12,853	413	27,579
Nebraska	11,036	21,767	22,375	2,274	35,077	180,932	44,597	45,887	3,380	228,909
Kansas	20,621	47,227	48,283	7,845	75,693	123,496	71,084	73,243	8,723	203,303
West North Central	170,180	361,810	371,698	198,529	730,519	699,935	523,643	582,649	236,795	1,460,373
Kentucky	30,253	67,591	71,156	65,389	163,233	56,927	79,209	85,512	76,668	212,804
Tennessee	31,135	59,693	63,203	61,696	152,524	71,843	66,338	70,538	69,087	207,268
Alabama	38,905	95,890	101,516	94,237	229,032	95,325	101,790	107,824	98,478	295,593
Mississippi	23,397	37,581	40,042	34,996	95,974	120,057	49,623	52,989	43,457	213,137
East South Central	123,690	260,755	275,917	256,318	640,763	344,152	296,960	316,863	287,690	928,802
Arkansas	15,487	33,817	35,249	33,909	83,213	73,409	40,392	42,238	52,024	165,825
Louisiana	14,565	26,476	27,800	23,039	64,080	66,276	29,560	31,573	25,373	121,209
Oklahoma	13,751	29,269	30,218	9,733	52,753	46,068	47,408	49,773	10,396	103,872
Texas	43,028	76,968	79,491	33,468	153,464	256,640	141,087	149,463	34,981	432,708
West South Central	86,831	166,530	172,758	100,149	353,510	442,393	258,447	273,047	122,774	823,614
Montana	1,072	1,301	1,320	73	2,446	7,401	14,406	14,792	81	21,888
Idaho	5,228	6,893	7,042	282	12,403	36,578	23,475	23,991	756	60,809
Wyoming	213	376	390	19	608	3,599	3,652	3,735	39	7,290
Colorado	3,923	7,739	7,806	1,070	12,732	31,468	22,666	22,967	2,085	56,219
New Mexico	2,067	2,012	2,115	289	4,368	14,663	11,458	11,838	572	26,693
Arizona	4,670	6,913	7,132	1,019	12,602	57,723	19,969	20,353	1,515	79,207
Utah	1,506	1,532	1,619	256	3,294	7,455	7,677	7,913	292	15,424
Nevada	197	188	199	55	440	1,719	908	946	58	2,685
Mountain	18,876	26,954	27,623	3,063	48,893	160,606	104,211	106,535	5,398	270,215
Washington	9,396	14,954	15,470	8,437	32,787	84,333	29,323	30,105	13,255	126,911
Oregon	5,513	9,227	9,479	4,666	19,406	47,441	20,169	20,963	6,855	74,465
California	45,880	43,928	45,749	17,112	106,920	290,160	106,099	110,392	31,612	427,871
Pacific	60,789	68,109	70,698	30,215	159,113	421,934	155,591	161,460	51,722	629,247
48 States and D. C.	1,107,603	2,196,817	2,301,833	1,928,410	5,232,830	3,303,345	2,780,811	3,079,574	2,220,417	8,304,573
Alaska	195	516	526	365	1,076	1,025	785	795	392	2,202
Hawaii	13,018	8,136	8,252	19,813	40,967	30,283	10,531	12,030	24,672	65,486
Puerto Rico	26,450	13,975	15,637	24,561	64,986	35,327	14,912	16,596	25,056	75,295
United States:										
1961-62	1,147,266	2,219,444	2,326,248	1,973,149	5,339,859	3,369,980	2,807,039	3,108,995	2,270,537	8,447,556
1960-61	1,071,224	2,069,425	2,176,530	1,883,111	5,023,760	3,030,788	2,645,085	2,999,993	2,168,533	7,844,406
1959-60	1,017,415	2,033,316	2,141,228	1,886,798	4,937,529	2,738,047	2,572,348	2,889,674	2,153,319	7,463,714

[1] Includes 2 percent of the colloidal phosphate and 3 percent of the phosphate rock marketed for direct application. [2] Includes 22 percent of the colloidal phosphate and 32 percent of the phosphate rock marketed for direct application.

Table 12. - Change in consumption of primary nutrients supplied in mixtures and in direct-application materials, by State and region, year ended June 30, 1962, compared with preceding year

State and region	Increase or decrease (-)									
	Mixtures					Materials				
	N	P_2O_5		K_2O	Total N, avail. P_2O_5 and K_2O	N	P_2O_5		K_2O	Total N, avail. P_2O_5 and K_2O
		Available	Total				Available	Total		
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
Maine	84	131	650	20	235	-210	215	204	8	13
New Hampshire	-53	-35	-36	44	-44	29	-72	-75	5	-38
Vermont	-244	-481	-500	-503	-1,228	-146	-193	-165	-2	-341
Massachusetts	438	-2	8	-79	357	51	22	13	-87	-14
Rhode Island	-15	3	-75	-14	-26	32	-23	-22	-2	7
Connecticut	467	383	400	391	1,241	-235	178	187	8	-49
New England	677	-1	447	-141	535	-479	127	142	-70	-422
New York	586	-77	-67	613	1,122	-1,026	-484	-596	29	-1,481
New Jersey	1,747	1,465	1,502	1,914	5,126	115	248	198	215	578
Pennsylvania	3,373	3,327	3,416	-1,912	4,788	337	-191	-873	-34	112
Delaware	691	649	612	565	1,905	556	-5	39	-40	511
Dist. of Columbia	35	-44	-45	-26	-35	1	4	7	6	11
Maryland	1,529	2,736	2,821	4,115	8,380	3,459	-84	-60	246	3,621
West Virginia	4	-443	-197	-226	-665	12	260	316	18	290
Middle Atlantic	7,965	7,613	8,042	5,043	20,621	3,454	-252	-969	440	3,642
Virginia	199	1,360	1,359	2,196	3,755	1,527	619	655	453	2,599
North Carolina	890	2,106	2,256	2,911	5,907	2,277	-62	-161	262	2,477
South Carolina	610	1,305	1,372	2,648	4,563	420	159	197	-707	-128
Georgia	-3,462	-8,683	-8,201	-7,225	-19,370	13,828	-740	-739	-2,018	-11,070
Florida	794	-687	-3,656	6,495	6,602	2,368	-410	-140	2,303	4,261
South Atlantic	-969	-4,599	-6,870	7,025	1,457	20,420	-434	-188	293	20,279
Ohio	6,308	19,914	20,700	10,796	37,018	15,457	485	886	3,616	19,558
Indiana	2,658	6,093	6,115	4,685	13,436	32,297	1,573	1,203	-1,172	32,698
Illinois	9,317	36,324	37,104	19,042	64,683	8,843	-4,191	-40,992	631	5,283
Michigan	-2,474	-6,106	-7,969	-10,026	-18,606	1,233	-1,260	-1,979	-318	-345
Wisconsin	854	-2,688	-3,456	-3,347	-5,181	259	537	31	2,469	3,265
East North Central	16,663	53,537	52,494	21,150	91,350	58,089	-2,856	-40,851	5,226	60,459
Minnesota	191	607	574	967	1,765	1,122	-1,388	-1,403	1,805	1,539
Iowa	4,428	10,655	9,282	2,514	17,597	26,122	2,756	3,198	4,341	33,219
Missouri	504	-5,715	-5,740	1,470	-3,741	5,273	-2,170	-14,807	500	3,603
North Dakota	-544	90	90	-382	-836	581	3,722	3,520	52	4,355
South Dakota	796	1,460	1,348	-91	2,165	2,632	1,406	1,560	181	4,219
Nebraska	1,310	3,490	3,895	-223	4,577	-15,637	1,531	1,457	276	-13,830
Kansas	3,419	12,269	12,379	121	15,809	24,751	-2,851	-3,244	176	22,076
West North Central	10,104	22,856	21,828	4,376	37,336	44,844	3,006	-9,719	7,331	55,181
Kentucky	3,550	12,489	12,737	7,097	23,136	6,207	-1,671	-1,772	2,106	6,642
Tennessee	2,724	2,881	2,971	3,613	9,218	8,307	-5,215	-6,553	-987	2,105
Alabama	371	3,701	3,523	8,773	12,845	3,979	301	375	-92	4,188
Mississippi	2,266	3,903	4,083	3,709	9,878	-366	-1,491	-1,654	-504	-2,361
East South Central	8,911	22,974	23,314	23,192	55,077	18,127	-8,076	-9,604	523	10,574
Arkansas	2,554	4,781	4,964	4,839	12,174	2,444	573	460	-1,596	1,421
Louisiana	1,409	2,290	2,358	1,284	4,983	3,230	-261	-548	-57	2,912
Oklahoma	3,668	7,612	7,826	2,109	13,389	18,161	1,352	1,218	240	19,753
Texas	11,695	18,655	19,284	7,965	38,315	58,885	21,180	22,039	171	80,236
West South Central	19,326	33,338	34,432	16,197	68,861	82,720	22,844	23,169	-1,242	104,322
Montana	120	234	236	-126	228	-1,001	-816	-825	-8	-1,825
Idaho	-147	-196	-211	-172	-515	-620	-4,214	-4,295	-13	-4,847
Wyoming	8	0	0	0	8	49	256	267	7	312
Colorado	819	1,999	1,879	-50	2,768	6,917	-833	-835	36	6,120
New Mexico	1,426	1,096	1,154	141	2,663	1,159	1,669	1,698	197	3,025
Arizona	334	161	156	-461	34	2,147	-1,184	-1,218	-297	666
Utah	286	264	268	31	581	-977	977	998	2	2
Nevada	-85	-104	-116	-30	-219	423	124	140	1	548
Mountain	2,761	3,454	3,366	-667	5,548	8,097	-4,021	-4,070	-75	4,001
Washington	1,611	4,220	4,280	6,022	11,853	18,524	3,504	3,589	1,372	23,400
Oregon	498	780	784	-1,023	255	1,496	-129	-23	665	2,032
California	4,529	1,994	3,319	2,084	8,607	2,546	-1,198	-1,427	-613	735
Pacific	6,638	6,994	8,383	7,083	20,715	22,566	2,177	2,139	1,424	26,167
48 States & D. C.	72,076	146,166	145,436	83,258	301,500	257,838	12,515	-39,951	13,850	284,203
Alaska	39	105	106	115	259	19	110	110	-22	107
Hawaii	2,855	472	490	4,219	7,546	3,633	-1,283	-1,483	-2,037	313
Puerto Rico	1,072	3,276	3,686	2,446	6,794	1,660	593	608	175	2,428
United States	76,042	150,019	149,718	90,038	316,099	263,150	11,935	-40,716	11,966	287,051

Table 13. - Primary-nutrient content of the kinds of fertilizer consumed, by region, year ended June 30, 1962

Kind	New England	Middle Atlantic	South Atlantic	East North Central	West North Central	East South Central	West South Central	Mountain	Pacific	Alaska, Hawaii, and Puerto Rico	United States
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
						Nitrogen					
MIXTURES: N-P-K	29,296	113,413	229,356	229,428	113,390	117,193	71,413	5,065	31,559	28,776	968,889
N-P	17	453	845	9,785	56,682	5,589	14,768	13,802	28,402	446	130,789
N-K	0	25	33,360	1,259	108	908	650	9	828	10,441	47,588
MATERIALS:											
Ammonia, anhydrous	0	3,180	22,260	122,002	210,378	62,749	177,035	50,729	118,335	757	767,425
Ammonia, aqua	0	0	14	7,032	8,592	49	3,377	8,091	64,679	7,949	99,783
Ammonium nitrate	1,587	9,128	50,147	55,778	132,324	97,390	62,838	28,663	29,709	959	468,523
Ammonium nitrate-limestone mixtures	1/	386	39,214	47	0	8,108	71	10	18	1	47,855
Ammonium sulfate	33	1,800	1,570	18,562	1,614	2,805	17,872	9,473	58,164	4,794	116,687
Bonemeal: raw and steamed	33	79	29	38	11	8	8	1	44	1/	251
Calcium cyanamide	107	1,224	1,367	114	18	1,686	959	221	997	1	6,694
Calcium nitrate	0	1	1,801	1/	0	0	6	2,021	3,455	16	7,300
Natural organics	1,028	1,555	1,789	1,728	567	125	164	1,167	8,398	0	16,521
Nitrogen solutions	547	7,098	76,414	81,233	131,586	20,979	21,398	9,061	23,062	1	371,379
Phosphate products	6	174	363	3,902	30,816	987	32,268	15,666	28,931	278	113,391
Potassium products	30	191	2,356	89	0	289	48	0	1/	1/	3,003
Sodium nitrate	160	1,743	32,679	386	96	22,085	8,455	90	82	4	65,780
Urea	681	4,882	2,279	26,427	13,283	2,219	30,939	15,422	24,460	12,212	132,804
Other chemical nitrogen products	62	392	446	915	470	983	124	1,115	811	0	5,318
Total nitrogen	33,587	145,724	496,289	558,725	699,935	344,152	442,393	160,606	421,934	66,635	3,369,980
						Available P_2O_5					
MIXTURES: N-P-K	36,607	186,876	437,345	528,537	229,493	224,572	122,777	7,413	38,943	19,770	1,832,333
N-P	7	523	370	28,752	115,238	3,461	29,634	19,469	28,530	1,794	227,778
P-K	4,631	22,770	29,758	36,483	17,079	32,722	14,119	72	636	1,063	159,333
MATERIALS:											
Ammonium phosphate: 11-48	0	488	21	10,711	30,016	248	4,232	8,668	11,739	887	67,010
Ammonium phosphate: 13-39	0	0	0	35	3,929	44	8,926	786	1,889	0	15,609
Ammonium phosphate sulfate: 16-20	0	0	0	68	21,312	44	37,044	10,651	26,220	21	95,360
Ammonium phosphate nitrate: 27-14	0	0	11	31	2,676	190	0	1,230	1,534	1/	5,672
Basic slag	0	0	869	0	0	5,630	167	0	0	0	6,666
Bonemeal: raw and steamed	352	697	359	408	88	72	61	8	349	4	2,398
Calcium metaphosphate	5	154	662	1,730	1,992	5,494	256	147	100	0	10,540
Diammonium phosphate: 21-53	15	150	858	3,343	4,171	1,345	765	7,256	3,083	131	21,117
Natural organics	636	1,064	1,035	1,791	421	81	112	890	5,467	0	11,497
Phosphate rock and colloidal phosphate	8	130	319	12,369	4,683	384	655	2	12	133	18,695
Phosphoric acid	0	0	0	337	1,500	0	347	6,667	5,946	0	14,797
Potassium products	0	1/	23	1/	1	0	0	0	0	0	24
Superphosphate: 22% and under	5,029	12,792	10,126	8,776	7,682	15,747	12,095	3,478	20,372	955	97,052
Superphosphate: over 22%	233	3,107	2,108	45,739	83,178	5,651	27,248	37,466	10,609	1,469	216,808
Other phosphate products	144	224	1,838	505	184	1,275	9	8	162	1	4,350
Total available P_2O_5	47,667	228,975	485,702	679,615	523,643	296,960	258,447	104,211	155,591	26,228	2,807,039
						K_2O					
MIXTURES: N-P-K	36,509	170,208	490,581	465,156	181,634	223,304	83,794	2,997	29,270	27,271	1,710,724
P-K	6,487	29,755	50,326	49,321	16,831	31,948	15,770	64	515	521	201,538
N-K	0	41	39,536	2,216	64	1,066	585	2	430	16,947	60,887
MATERIALS:											
Lime potash mixtures	0	52	1,633	0	3	372	0	0	3	0	2,063
Manure salts	0	0	1,783	8	1	0	7	0	0	0	1,799
Natural organics	265	540	681	552	130	32	40	662	9,401	0	12,303
Potassium chloride	657	5,028	20,526	133,379	37,938	26,164	21,923	1,191	7,151	4,650	258,607
Potassium magnesium sulfate	7	219	1,613	563	52	380	453	94	266	22	3,669
Potassium nitrate	50	4	31	1/	0	1	0	0	0	0	86
Potassium sodium nitrate	14	187	2,160	84	0	273	46	0	1/	1/	2,764
Potassium sulfate	72	965	3,026	1,087	129	4,150	50	388	4,531	709	15,107
Other potassium products	127	3	571	15	13	0	106	0	155	0	990
Total K_2O	44,188	207,002	612,467	652,381	236,795	287,690	122,774	5,398	51,722	50,120	2,270,537
GRAND TOTAL: N, avail. P_2O_5, K_2O	125,442	581,701	1,594,458	1,890,721	1,460,373	928,802	823,614	270,215	629,247	142,983	8,447,556

1/ Less than 0.5 ton.